

# PSYCHOLOGICAL ABSTRACTS

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## GENERAL (incl. Statistics)

3859. **Bunch, M. E.** John Alexander McGeoch. *Psychol. Rev.*, 1942, 49, 293-297.—At his premature death, he was head of the Iowa State University psychology department, editor of the *Psychological Bulletin*, and president of the National Institute of Psychology. His many research contributions centered in learning and forgetting, which he held basic to all other categories. A text on human learning is in publication, and a longer critical treatise on learning written jointly with H. A. Carr is still incompletely completed. Portrait.—A. G. Bills (Cincinnati).

3860. **Curran, F. J.** Paul Schilder, his contribution to psychopathology. *Brit. J. med. Psychol.*, 1942, 19, 151-154.—A biographical sketch and appreciation.—E. R. Hilgard (U. S. Dept. of Agriculture).

3861. **Erickson, R. W.** Isomorphism as a necessary concept. *J. gen. Psychol.*, 1942, 26, 353-358.—Boring's attack (see XI: 538) on isomorphism is reviewed and critically analyzed. The author believes that the identity notion substituted by Boring for isomorphism is unsound and that his criticisms of isomorphism are unwarranted.—C. N. Cofer (George Washington).

3862. **Fox, H.** Adolf Meyer, a personality sketch. *Psychiatry*, 1942, 5, 159-162.—A brief review is given of personal contacts during a 10-year period, and those instances most illustrative of Adolf Meyer's personality, teaching ability, psychiatric and social thinking are cited.—M. H. Erickson (Eloise Hospital).

3863. **Ghiselli, E. E.** Estimating the minimal reliability of a total test from the inter-correlations among, and the standard deviations of the component parts. *J. appl. Psychol.*, 1942, 26, 332-337.—A description of a procedure to determine a minimal reliability of a test where it is impossible to divide the test into two equivalent parts.—W. F. Madden (Middlebury).

3864. **Kelley, D. M.** Requirements for Rorschach training. *Rorschach Res. Exch.*, 1942, 6, 74-77.—In response to a questionnaire, leading Rorschach workers gave opinions concerning how much training is necessary before an individual may be considered competent to do good Rorschach work. Most workers believe (1) that at least 1-2 years work are required, including approximately 20-30 hours of theoretical instruction, the rest of the time being devoted to intensive study of actual records under the guidance of a skilled worker; and (2)

that a college background with extensive training in either psychology or psychiatry or both is a necessary prerequisite for training in the method. Certain personal qualifications concerning adjustment and sincerity are also made.—R. E. Horowitz (Washington, D. C.).

3865. **Murphy, G.** Psychology and the post-war world. *Psychol. Rev.*, 1942, 49, 298-318.—The war will transform the sciences dealing with human nature. Social pressure and demand have molded psychology's past history, and post-war social needs will revitalize its future. Research is being and will be recast along interdisciplinary lines, with psychology cooperating more intimately with other fields and having more fluid boundaries. Psychologists must assist in the discovery of practical ways of maintaining peace, because reconstruction on an economic and military basis alone, which ignores the deeper human needs, is impractical.—A. G. Bills (Cincinnati).

3866. **Pratt, K. C.** Character: the crisis in psychology. *J. gen. Psychol.*, 1942, 26, 365-369.—The crisis in psychology "is one of character. It is produced by the substitution of sales appeal for scientific adequacy and impartiality in the selection of content for textbooks." The author decries the following tendencies noted in current texts: (1) eclecticism, which is a matter of sales appeal; (2) the exploitation of students' interests and "felt needs" by writers of texts instead of impartiality and adequacy in the selection of content. Instances of the latter trend are cited.—C. N. Cofer (George Washington).

3867. **Roback, A. A.** *Psychorama: a mental outlook and analysis*. Cambridge: Sci-Art, 1942. Pp. 365. \$2.90.—Many of the essays in this collection have appeared in the form of syndicated articles. They cover a variety of topics including political events and reactions thereto, reflections on books and men who wrote them, decisions on issues, "grins and groans" from the point of view of a psychologist interested in the Jewish world situation.—W. A. Varvel (Texas A. & M.).

3868. **Scates, D. E.** The conceptual background of research. *Suppl. educ. Monogr.*, 1942, No. 55, 22-37.—The author emphasizes the role of man's concepts as a determinant of scientific progress. Historically four social concepts retarded the development of research: (1) the dominance in societal beliefs of a well-integrated system of nonscientific answers to most of man's questions, (2) the fashion of referring all questions to basic premises established by societal authority, (3) the opposition of inhospitable organized groups, (4) the paucity of energy and facilities provided specifically for the work. The

importance of the concepts and hypotheses held by the research worker are described. The lack of instruments and the role of facts in research are both held subsidiary to the place of ideas in research.—*S. C. Erickson (Arkansas).*

3869. Smith, K. U. An improved dry-ice freezing unit for cutting frozen sections. *J. gen. Psychol.*, 1942, 26, 373-375.—Diagrammatic views of the unit are presented, and the procedure to be used in employing it is described.—*C. N. Cofer (George Washington).*

3870. Swineford, F., & Holzinger, K. J. Selected references on statistics, the theory of test construction, and factor analysis. *Sch. Rev.*, 1942, 50, 456-465.—The 72 items in this annotated bibliography cover the period from March, 1941, to March, 1942.—*R. C. Strassburger (St. Joseph's College for Women).*

3871. Wiesenhöfer, H. [Mobile low pressure chamber for testing and instruction of airplane crews in high altitude atmospheric conditions.] *Dtsch. Militärarzt*, 1940, 5, 457-460.—[Abstracted review; original not seen.] The outfit consists of a motor car, a trailer housing the low pressure chamber, and a machine trailer, and it contains all equipment required for tests at the flying fields.—*C. Pfaffman (U. S. Naval Reserve).*

3872. Wolfe, T. P. [Ed.] International journal of sex-economy and orgone-research. New York: Orgone Institute Press. Vol. 1, No. 1, March, 1942. 3 times a year. \$3.00.

3873. Wolfe, D. Psychologists in government service. *Psychol. Bull.*, 1942, 39, 385-403.—This is a list of names, present titles and locations of 465 APA members who are giving full-time or part-time service to the federal government. 324 are in full-time service. Tables of present duties and 1940-41 residence are included, the latter showing that psychologists were drawn from all parts of the country.—*F. McKinney (Missouri).*

[See also abstracts 3993, 4063, 4155.]

#### NERVOUS SYSTEM

3874. Bennett, A. E. The value of electroencephalography in neurology. *Dis. nerv. Syst.*, 1942, 3, 185-187.—The clinical use of the EEG is discussed; it is shown to be of great value in diagnosis, a guide in prognosis, and an aid in the therapy of many neurologic diseases.—*C. E. Henry (Western Reserve).*

3875. Bonin, G. V., Garol, H. W., & McCulloch, W. S. The functional organization of the occipital lobe. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jaques Cattell, 1942. Pp. 165-192.—Strychnine is applied to a small area of the exposed occipital cortex of a macaque or chimpanzee. The resulting "strychnine spikes" of electrical activity are then recorded simultaneously from several adjacent regions of the cortex by the use of electrodes and ink-writing oscillographs. By this technique it is possible to define three different areas in the occipital

lobe. These areas, corresponding to a considerable extent to areas 17, 18, and 19 in Brodmann's scheme, are referred to as the striate, parastriate, and preoccipital areas respectively. Strychninization of the striate area affects the striate only locally near the point of application and also causes some firing of the parastriate area. Strychninization of the parastriate, however, causes widespread firing within this area, some firing within adjacent portions of the striate area, and also firing of the pre-occipital area. Parts of the inferior temporal and middle temporal convolutions are also affected, and some effect is shown in the parastriate area of the opposite hemisphere. Strychninization of the pre-occipital area causes only local firing but leads eventually to a suppression of electrical activity of the cortex of both hemispheres.—*L. A. Riggs (Brown).*

3876. Bucy, P. C. The neural mechanisms of athetosis and tremor. *J. Neuropath. exper. Neurol.*, 1942, 1, 224-239.—This special article reviews anatomical, pathological, physiological, and surgical evidence with regard to athetosis, hemiballismus, and intention and Parkinsonian tremors. Emphasis is placed on the relations of sub-cortical and cortical structures, especially in light of the newer neurophysiological conceptions of suppressor areas in the cortex.—*D. B. Lindsley (Brown).*

3877. Case, T. J. Alpha waves in relation to structures involved in vision. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 107-116.—There is a focus of alpha-wave activity in each of the occipital, parietal, and frontal lobes of the brain. The occipital potentials are larger than the others and may be one or two cycles per second faster. They are also more subject to the effects of light or pattern vision. Flickering light whose flash frequency is nearly the same as the occipital alpha-wave frequency seems brighter subjectively, and in some animals it may drive or otherwise affect the occipital waves. Usually the occipital alpha waves from the left and right lobes are equal and in phase. A lesion in one of the occipital or temporal lobes usually involves the optic radiations and causes homonymous hemianopsia on the side opposite the lesion. In an examination of over 100 such cases, every one showed a substantial difference between occipital alpha waves on the two sides.—*L. A. Riggs (Brown).*

3878. Darrow, C. W. Excitatory and homeostatic effects on the electroencephalogram. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 19.—Abstract.

3879. Dow, R. S., & Anderson, R. Cerebellar action potentials following proprioceptive and exteroceptive afferent stimulation in the rat. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 22.—Abstract.

3880. Eccles, J. C., Katz, B., & Kuffler, S. W. Effect of eserine on neuromuscular transmission. *J. Neurophysiol.*, 1942, 5, 211-230.—The local negative (endplate) potential is both increased and

lengthened in cat and frog myoneural junctions by eserine; in addition, repetitive nerve volleys produce a delayed "slow wave." These changes may produce repetitive muscle spikes, lengthening of refractory period, or a complete block of impulse propagation. Curare antagonizes the eserine effect but does not prevent it. The principal effect of eserine is a lengthening of the action of the neuromuscular transmitter. The results are interpreted as further evidence for the hypothesis that acetylcholine is responsible for the local potential changes set up by nerve impulses.—D. B. Lindsley (Brown).

3881. Elmgren, J. *Quelques notions sur l'électrencéphalogramme humain.* (Some remarks on the human electroencephalogram.) *Göteborgs Högsk. Årsskr.*, 1941, 47, No. 10. Pp. 24.—After a critical discussion of problems and findings in the literature, the author reports his own investigations. Inspectional analysis showed wide individual differences at rest, partly due to the varying ability completely to relax mentally. Repeated recordings on the same individuals after 3-30 days intervals showed a decided constancy. Problem-solving was characterized by a very marked beta rhythm interrupted by alpha waves of larger-than-ordinary amplitude. The resting curves of a pair of identical twins were found strikingly similar. Their recordings in problem solving were mirror images, one twin having alpha wave peaks where the other had alpha wave valleys. Sample records are reproduced.—R. K. Meister (Mooseheart Laboratory for Child Research).

3882. Garol, H. W. The "motor" cortex of the cat. *J. Neuropath. exp. Neurol.*, 1942, 1, 139-145.—Using well controlled electrical stimulation the convexity of the cortex was explored. Two types of results were obtained, motor responses and suppression. Peripheral motor responses were most readily obtained from the area gigantopyramidalis of Brodmann and correspond in their cortical arrangement to those found in primates and man, with the exception of the trunk representation. The results show a wider representation of motor response areas on the cortex than heretofore reported. The second type of result has to do with suppression which manifests itself in two ways. Stimulation of restricted regions in areas 8, 3-4, 2, and 19 produces a suppression effect by causing a transient rise in threshold of foci for motor response or by holding in abeyance motor after-discharge resulting from stimulation. The suppression effect occurs 3-5 minutes after stimulation of the delimited suppressor areas and may persist for 10-20 minutes. Knowledge of the location of these areas is a distinct aid in searching for or mapping responsive areas of the motor cortex.—D. B. Lindsley (Brown).

3883. Gellhorn, E., & Kessler, M. The influence of hypoglycemia and electroshock on the electroencephalogram. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 28-29.—Abstract.

3884. Gibbs, F. A., Lennox, W. G., Nims, L. F., & Gibbs, E. L. Differentiation of the effect of low

$O_2$  and low  $CO_2$  on the electrical activity of the cortex. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 29.—Abstract.

3885. Hoagland, H. Electricity and the brain. *Amer. Scholar*, 1942, 11, 351-358.—The elementary electrophysiology of cells in general and of nerve cells in particular is discussed before presentation of the facts of EEG: location of tumors, diagnosis of epilepsy, the normal activity of the brain and its behavioral, chemical, and hormonal alterations. EEG is a valuable technique for understanding the functional interrelations of parts of the brain.—L. H. Beck (Brown).

3886. Katz, B. Impedance changes in frog's muscle associated with electrotonic and "endplate" potentials. *J. Neurophysiol.*, 1942, 5, 169-184.—Impedance changes induced by a nerve volley were recorded at the neuromuscular junction of the frog's sartorius. A decrease of impedance is associated with the propagated spike wave in normal muscle and with the endplate potential in curarized muscle. These changes are presumably due to modifications of membrane permeability. The results are discussed in relation to neuromuscular transmission.—D. B. Lindsley (Brown).

3887. Kennard, M. A., & McCulloch, W. S. Excitability of cerebral cortex in infant *Macaca mulatta*. *J. Neurophysiol.*, 1942, 5, 231-234.—Although voluntary movements do not begin in the infant monkey until about two months of age suggesting little function in the cerebral cortex, some of the movements made must have cortical representation since this experiment in a 20-day old monkey has demonstrated some typical cortical response mechanisms to electrical stimulation. Motor responses could be elicited by stimulation of the posterior margin of area 4 of the motor cortex; both facilitation and extinction could be demonstrated. Likewise stimulation of a suppressor area (4-s or 8) prevented subsequent response to stimulation of motor foci. These results are interpreted as indicating that area 4 of the three-week old macaque is capable of initiating the slow and poorly differentiated movements typical of its age. This is perhaps not surprising since it is known that area 4 is the first to develop and become myelinated. Responses are more easily elicited in face than hand regions and cannot be elicited at all in the leg region. A lack of response in area 6 is correlated with the presence of forced grasping normal for that age.—D. B. Lindsley (Brown).

3888. Kessler, M., Hailman, H., & Gellhorn, E. Influence of lowered barometric pressure on the EEG under various conditions. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 46-47.—Abstract.

3889. Kuffler, S. W. Responses during refractory period at myoneural junction in isolated nerve-muscle fibre preparation. *J. Neurophysiol.*, 1942, 5, 199-209.—Electric responses were recorded at the junctional region of a single nerve-muscle fibre preparation in the adductor longus of the frog. The

object of the study was to determine what kind of response is set up when the nerve impulse acts during the refractory period of the muscle. Three types of response were recorded: (1) an endplate potential, (2) "abortive" impulses which are local and die out, and (3) fully propagated impulses. The "abortive" impulses represent a transitional stage between blocked and normal neuromuscular transmission. Such "abortive" impulses may attain as much as 30% of the full spike potential height and may "grow up" gradually and be transmitted or may diminish and die out. Thus it appears that the endplate potential may affect the excitability gradient in two ways.—*D. B. Lindsley* (Brown).

**3890. Larsell, O.** Anatomy of the nervous system; a textbook from the developmental and functional point of view and atlas of the nervous system of man. New York: Appleton-Century, 1942. Pp. 461. \$6.50.—This is a new, enlarged, and improved edition of the author's *Textbook of neuro-anatomy and the sense organs*, published in 1939, designed primarily for first year medical students. Discussion of the physiology of the parts and summaries of illustrative lesions give the reader an idea of their functional significance. The illustrations, many of them in color, include a 60-page atlas of the spinal cord and brain with illustrations of cross sections of the cord and brain stem and frontal sections of the cerebral hemispheres. 8-page bibliography.—*J. W. Wilson* (Brown).

**3891. Monnier, M.** Les centres végétatifs du tronc cérébral; localisation par la méthode des excitations électriques chez le chat. (Localization of the vegetative centers in the cat's cerebral axis by the method of electrical stimulation.) *Schweiz. Arch. Neurol. Psychiat.*, 1941, **48**, 272-330.—This is a synopsis of Monnier's atlas showing the localization of the central regulating systems in their course from the telencephalon through the medulla. According to the effect of electrical stimulation they are divided into activating and inhibiting centers. The synergic ergotropic reactions (cardiovascular, respiratory, somatomotor, etc.) and similarly the inhibiting and trophotropic reactions are elicited by stimulation of well-defined areas in the different axial segments. In the oral segments, notably the hypothalamus, the areas are organized according to a collective principle, and their activities, ergotropic or trophotropic, are concerned with emotional states. In the peduncle and pons, the systems are scattered and intermingled. In the medulla, they reorganize themselves into circumscribed centers, and their action takes on the automatic spinal character. Plates. Extensive bibliography.—*M. E. Morse* (Baltimore, Md.).

**3892. Pacella, B. L., & Barrera, S. E.** Electroencephalography: its applications in neurology and psychiatry. *Psychiat. Quart.*, 1941, **15**, 407-437.—The EEG is described, and various records are discussed. The authors review the literature pertaining to important syndromes and offer EEG findings. They plead for the adoption of routine electroen-

cephalography in state hospitals because of the following: (1) its value in localizing pathological lesions of the cortex; (2) its aid in the diagnosis of convulsive disorders; and (3) the occasional discovery of structural pathology of the brain where no cerebral pathology had previously been suspected because of the absence of neurological signs. A large bibliography is appended.—*A. Weider* (N. Y. U. Medical College).

**3893. Pacella, B. L., Barrera, S. E., & Kopeloff, L. M.** Electroencephalographic studies on monkeys with chronic Jacksonian seizures. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, **1**, No. 1, Part II, 65.—Abstract.

**3894. Peterson, G. M., & Chaplin, J. P.** Extra-pyramidal mechanisms in handedness in the rat. *J. comp. Psychol.*, 1942, **33**, 343-361.—In this study two general methods were used: "1. Cerebellar destructions were produced in some cases with both pyramidal systems intact and in others with these systems destroyed. 2. Assorted cortical and subcortical destructions were produced after the pyramidal systems were destroyed." Some of the conclusions reached are as follows: Unilateral cerebellar destructions have no effect upon the handedness of the rat whose cerebral cortex is intact, while bilateral cerebellar destructions may affect the animal's posture so as to produce alternating reaching movements. Bilateral destructions of pyramidal mechanisms sometimes abolish the ability to reach for food, and sometimes result in relearning. After bilateral pyramidal destructions, further destructions in the occipital or temporal regions of the cerebral cortex are without effect. "On the basis of these findings and from detailed discussion of the results of cases studied here, it is generally concluded that the pyramidal systems of the cerebral cortex are the prepotent mechanisms in the control of handedness in the rat."—*K. F. Muenzinger* (Colorado).

**3895. Renshaw, B.** Effects of presynaptic volleys on spread of impulses over the soma of the motoneuron. *J. Neurophysiol.*, 1942, **5**, 235-243.—It has been demonstrated in cats and rabbits that antidiromic impulses set up in ventral root fibers produce measurable potential variations in the ventral horn; the potentials arise from the motoneuron soma (cell body and dendrites). Such potential variations of the cell body may be produced by synaptic stimulation or antidiromically. Stimulation of dorsal roots produces conditioning volleys which may increase or decrease the potentials recorded from the motoneuron soma, depending upon time relationships. The results indicate that retrograde conduction (from axon to cell body and dendrites) occurs with decrement which may be modified by appropriate sensory or premotor neuron stimulation.—*D. B. Lindsley* (Brown).

**3896. Semrad, E.** A note on the pneumo-encephalogram and electro-encephalogram findings in chronic mental patients. *Dis. nerv. Syst.*, 1942, **3**, 190.—Abstract.

3897. Woolsey, C. N., Marshall, W. H., & Bard, P. Representation of cutaneous tactile sensibility in the cerebral cortex of the monkey as indicated by evoked potentials. *Johns Hopkins Hosp. Bull.*, 1942, 70, 399-441.—The skin was stimulated by light pressure or brushing the hairs. Point by point examination of the areas sending impulses to the points examined showed that the tactile system projects primarily to Brodmann's areas 3, 1, and 2 of the contralateral hemisphere. The results are presented pictorially with detailed explanations. Analysis of the cortical tactile representation in terms of the dermatomes showed that the segments T<sub>1</sub>-C<sub>4</sub> are projected in the same order as they exist in the cord, but the cervical segments are reversed en bloc. The results of this discontinuity are discussed. The cortical representations of structure and function are inseparable. Anatomical representation is based, not on size, but on the relative functional values of the dermatomes. The cortical sensory areas of man and monkey appear to be similarly organized, and clinical disturbances of cortical sensory function can be interpreted on the basis of the structural and functional organization revealed by these experiments.—M. E. Morse (Baltimore, Md.).

[See also abstracts 3869, 3898, 3901, 3903, 3907, 3908, 3912, 3914, 3918, 3921, 3932, 3933, 3937, 3943, 3945, 3949, 3960, 4018, 4039, 4049, 4050.]

#### RECEPTIVE AND PERCEPTUAL PROCESSES

3898. Adrian, E. D. Olfactory reactions in the brain of the hedgehog. *J. Physiol.*, 1942, 100, 459-473.—The oscillograph demonstrates a characteristic periodic activity under nembutal anaesthesia in the olfactory bulb and pyriform area. Normal breathing produces a series of large regular waves in the pyriform area at each inspiration. They have no relation to the respiratory movements, their frequency (15-45 per sec.) being determined by the velocity of the air. Plugging the nose abolishes them. If a strong odor (e.g. cloves) is added to the air, the resting rhythm is replaced by small irregular waves, about 50 per sec. With leads from the mitral cell layer of the olfactory bulb, a discharge is heard at each inspiration. An odor increases the discharge. These results apparently demonstrate that the olfactory organ is stimulated both mechanically by the air current and chemically by odors in it. The air current produces a uniform excitation resulting in synchronous waves, whereas chemical stimulation is unevenly distributed, the large waves breaking up because of the differential sensitivity of the neurones. Different chemical stimuli apparently produce characteristic distributions of excitation, and thus a familiar smell is recognized by the specific pattern which it arouses in the brain. The olfactory discharge in mammals resembles that previously found in fishes.—M. E. Morse (Baltimore, Md.).

3899. Bahr, G. v. The effect of peripheral rays in testing of the light sense; a study on the im-

portance of the pupil area. *Acta ophthal. Kbh.*, 1941, 19, 114-124.—[Abstracted review; original not seen.] Careful laboratory tests with well trained observers using the Gullstrand photoptometer demonstrated that while the effective power of light rays can be calculated for the central retina, it is difficult to calculate the effective power for peripheral rays, which are not proportional to the size of the pupil. More accurate determinations of light sense could be obtained by the use of a contracted pupil secured by a miotic drug.—D. J. Shaad (Lawrence, Kansas).

3900. Bald, L., Berrien, F. K., Price, J. B., & Sprague, R. O. Errors in perceiving the temporal order of auditory and visual stimuli. *J. appl. Psychol.*, 1942, 26, 382-388.—The effect of predisposing and other factors on the apparent time order of successive sounds and flashes was investigated. The time intervals were .04, .08, .12, and .16 seconds. Within these time intervals, the group as a whole made more errors in judgment when the sound was presented first. The group best situated in the experimental room made more errors when the flash was presented first. When the sound source was obscured from view, errors increased.—W. F. Madden (Middlebury).

3901. Bartley, S. H. Visual sensation and its dependence on the neurophysiology of the optic pathway. In Klüver, H., *Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 87-106.—Certain characteristics of visual sensation do not correspond to characteristics of the stimulating light, but rather to modifications imposed on the flow of impulses from the retina to the cortex. Some after images, for example, are related to wave groupings in the on-response of the retina. The retina is probably also responsible for certain flicker phenomena resulting from intermittent stimulation at a frequency near the critical frequency of fusion. There appears to be an alternation of response to flicker such that, if a given flash arouses some receptor units, these units will be in a refractory condition when the next flash appears. Other units respond to this next flash; and the final report sent in to the brain includes a mass of impulses from many fibers, each responding to some of the flashes of the flickering stimulus light. At low flash frequencies these impulses are well synchronized, but as the critical frequency of fusion is reached, the impulses from closely adjacent points on the retina will be out of phase with one another, and the sensation becomes equivalent to that of viewing a steady illumination.—L. A. Riggs (Brown).

3902. Broda, E. F. The rôle of the phospholipin in visual purple solutions. *Biochem. J.*, 1941, 35, 960 ff.—[Abstracted review; original not seen.] Phospholipin contained in solutions of visual purple causes a light-filter effect which accounts for the apparent decrease in efficiency of the decomposition of visual purple in solution in the blue and violet ranges, and for the discrepancy in this range between the photosensitivity curve of visual purple solutions

and the human scotopic sensitivity range.—*D. J. Shaad* (Lawrence, Kansas).

3903. Brown, C. W. The ability of normal rats and rats with hemisectioned spinal cords to discriminate differences in linear distance. *J. comp. Psychol.*, 1942, 33, 305-314.—"Forty-three normal rats and 54 rats with lesions in various parts of the spinal cord at the level of the first cervical process were trained to discriminate differences in linear distance. The operated animals learned the problem as readily as did the normals. They also had thresholds as low as did the normal rats. These results cast doubt on the conclusions of Lashley and Ball and Ingebritson that severing the tracts in the dorsal half of the spinal cord prevents the rat from utilizing kinesthetic cues in the learning and retention of the maze. They point to the presence of tracts in the cord, located elsewhere than in the dorsal half, which subserve the function of kinesthesia."—*K. F. Muenzinger* (Colorado).

3904. Campbell, P. A. The effect of flight upon hearing. *J. Aviat. Med.*, 1942, 13, 56-61.—The contribution of the following factors to the audiogram is discussed: the originally inherited auditory mechanism, age, noise, the ability of the tubotympanic apparatus to equalize barometric pressure changes, disease, anoxia. Some or all of these factors may be important in any one case. For example, noise reduces hearing in the 4000-6000 cycle range. Failure to adjust barometric pressure in the middle ear may reduce hearing in the range from 100 to 1000 cycles. The complications introduced by diseases not directly produced by aviation should be borne in mind. Anoxia is probably of little practical importance since the oxygen requirements of fliers are usually well met. Composite audiograms of flying personnel for the effects of barometric pressure, noise, and age should be constructed.—*C. Pfaffman* (U. S. Naval Reserve).

3905. Drennova, K. A., & Titov, A. I. [The influence of ultrasounds on the ear of animals.] *Z. ušn. Bol.*, 1939, 16, 104-113.—[Abstracted review; original not seen.] Cold-blooded animals (goldfish, frogs) show little sensitivity to ultrasounds from 960,000 to 2,000,000 Hertz, warm-blooded animals (mice, pigeons, etc.) show great sensitivity. Bleeding and destruction of Corti cells were observed in the latter, in the former only minor effects were determined. English summary.—*H. L. Ansacher* (Brown).

3906. Elkin, D., & Tagamlitzkaya, R. [Distance determination by means of sound.] *Z. ušn. Bol.*, 1939, 16, 195-200.—[Abstracted review; original not seen.] 30 seamen served as subjects. In an 8 m.-long room a Lehmann hammer was sounded. The error of distance judgment was smaller when the instrument was far from, then when it was close to the ear; at 1.50 m. the error was 50%, at 7 m., only 4.6%. In a second experiment the Wundt pendulum and various arrows were used in a 20 m.-long room, and similar results were obtained. The practical implications are: In navigation only loud sound

sources, well known to the workers, should be used for signalling. For short distances visual signals are to be preferred. Distance judgment can be improved considerably through practice. English summary.—*H. L. Ansacher* (Brown).

3907. Galambos, R., & Davis, H. The response of single auditory nerve fibers to acoustic stimulation. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 27-28.—Abstract.

3908. Gellhorn, E. Anoxia in relation to the visual system. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 73-85.—Even mild degrees of anoxia effect a reversible depression of such visual functions as intensity discrimination, dark adaptation, visual acuity, color perception, and after-image formation. Voluntary eye movements are likewise disturbed, but eye nystagmus is relatively unaffected. Autonomic activity is heightened during anoxia. The pupil dilates, thus admitting more light and compensating to some extent for the decrease in retinal sensitivity. Anoxia aggravates the effects of hypoglycemia on the brain and causes the appearance of large delta waves in the EEG. Inhalation of 100% oxygen offsets the effects of hypoglycemia and restores the normal EEG picture. These brain events are mirrored in the visual system, as illustrated by the fact that the effects of hypoglycemia on dark adaptation may be offset by inhalation of oxygen.—*L. A. Riggs* (Brown).

3909. Hecht, S. Energy relations in vision. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 1-22.—Under favorable conditions the threshold value of a visual stimulus is such that from 58 to 148 quanta must have comprised the flash of light. Most of these quanta are lost, however, by reflection from the cornea, absorption by the ocular media, and retinal transmission without absorption by the visual purple. When corrections for these factors are applied, the number of quanta actually absorbed by the retinal rods is seen to be from 5 to 14. This is taken to mean that one quantum is absorbed by each of 5 to 14 rods. Since the number of quanta is so small, it is subject to considerable variation from flash to flash. Hence the variability which is characteristic of threshold determinations may result more from variations in the stimulus than from the variability of the receptor mechanism. (See also XV: 4122.)—*L. A. Riggs* (Brown).

3910. Hunt, F. L. Your voice and the telephone. *Sci. Mon., N. Y.*, 1942, 54, 139-148.—A good telephone system must fit the requirements of the human voice: transmission of low pitched vowel sounds and high pitched consonants. Also, the requirements of the human ear must be met, so the system must be designed to meet the audibility function shortcomings.—*R. L. Solomon* (Brown).

3911. Klüver, H. [Ed.] Visual mechanisms. Lancaster, Pa.: Jacques Cattell, 1942. Pp. viii + 322. \$3.25.—This is Volume VII of a series entitled *Biological symposia*. 8 papers of this

symposium were read at the University of Chicago 50th anniversary celebration in September, 1941, and the remaining 4 were added later (see XVI: 3875, 3877, 3901, 3908, 3909, 3912, 3915, 3918, 3924, 3926, 3940, 3942).—L. A. Riggs (Brown).

3912. Klüver, H. Functional significance of the geniculo-striate system. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 253-299.—The effects of bilateral destruction of the striate cortex were studied in macaques. The experimental animals are able to respond, after conditioning, to the brighter or dimmer of two lights exposed simultaneously or successively. Absolute thresholds and brightness discrimination thresholds are very low. There is a functional equivalence of visual brightness and area such that the response is determined by the density of luminous flux entering the eye. Pattern and color vision are not present. Visual space and its dimensions are not effective in determining behavior. Yet the relationships among properties usually referred to as shape, size, smoothness, etc. are still responsible, as in the intact animal, for a functional equivalence of visual stimuli which are by no means equal in their physical properties.—L. A. Riggs (Brown).

3913. Komendantov, L. E. [About the ototopics.] *Z. ušn. Bol.*, 1939, 16, 3-6.—[Abstracted review; original not seen.] Ototopics (sound localization) depends not only on the function of the cochlea but also on the vibratory-tactile sensitivity of the skin. A sound originating in front is localized in front with eyes closed. If, however, the right hand is extended toward the sound source, the sound is perceived as coming from the right. English summary.—H. L. Ansbacher (Brown).

3914. Komendantov, L. E. [About the mechanism of sound perception.] *Z. ušn. Bol.*, 1939, 16, 99-103.—[Abstracted review, original not seen.] The tectorial membrane is negatively charged, the Corti cells are positively charged. Each movement of the former causes a change of the electric potential in the auditory cells, and this change is transmitted to the central organ. A specially constructed model of the Corti cells demonstrates these contentions. English summary.—H. L. Ansbacher (Brown).

3915. Krause, A. C. The photochemistry of visual purple. In *Klüver H. Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 23-41.—Visual purple (v.p.) is estimated to have a molecular weight of from 100,000 to 800,000. It consists of about 50-65% protein and 35-50% lipid, appearing to be a protein conjugated or condensed with a complex lipid having a large molecular weight. There is no reason to believe that v.p. is a protein directly coupled with a carotenoid, beta carotene, vitamin A, or visual yellow. V.p. is formed when vitamin A is partly oxidized and coupled or condensed with a reactive group of a lipo-protein. The decomposition of v.p. by light leads to the formation of 5 lipid substances, which may in turn participate in the regeneration of v.p. V.p. appears to have conjugated ethylene groups similar to those of dyes

which are used to sensitize photographic emulsions and to extend the absorption of light into the visible portion of the spectrum.—L. A. Riggs (Brown).

3916. Kühl, A. Die Abhängigkeit der Unterschiedsschwelle von der Objektgrösse und Umfeldleuchtdichte. (The dependency of the difference threshold on the size of the object and the illumination intensity of the surrounds.) *Z. Instrum Kde.*, 1940, 60, 293-304.—[Abstracted review; original not seen.] In a previous paper (see XV: 4126) it has been shown that the threshold intensity for the completely dark adapted eye is determined by the size of the field, that the adapting intensity in adaptation is also determined by the size of the field, and that these two relationships correspond closely. The present paper reports experiments by Shou-Nan Lu and L. F. Fortmiller which confirm the previous findings.—H. L. Ansbacher (Brown).

3917. Landis, C., & Vinacke, W. E. The discrimination of color and form at levels of illumination below conscious awareness. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 48.—Abstract.

3918. Lashley, K. S. The problem of cerebral organization in vision. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 301-322.—Visual impressions consist of organized objects which may be functionally equivalent in spite of wide variations in illumination, size, position within the visual field, etc. This statement is true for the rat as well as for man, and for animals with destruction of the striate areas of the brain. Evidently the process of generalization is inherent in normal sensory activity and should not be interpreted by recourse to special theories of brain fields or higher intellectual centers. A stimulus typically activates millions of neurons, and behavior is the statistical outcome of this activity in which the contribution of any single neuron is negligible. A reasonable structural basis for this activity is found in the reverberating network system described by Lorente de Nò. The cortex may be regarded as being composed of countless resonators which respond with characteristic masses of activity. Visual stimulus figures then arouse resonance patterns which vary according to linearity, direction, etc. These variations are relatively independent of the particular retinal receptors which are involved. On the motor side a similar situation must exist, since equivalent responses may be carried out by diverse muscle groups.—L. A. Riggs (Brown).

3919. Lauer, A. R., Merriam, M. H., & Uhlaner, J. E. Visual acuity under conditions of scotopic and photopic vision. *Yearb. Optom.*, 1941, 231-241.

3920. Lewis, T. Pain. New York: Macmillan, 1942. Pp. xiii + 192. \$3.00.—This is a critical and descriptive account of the experimental and clinical literature on pain sensitivity grouped under the following chapter headings: pain-sensitive tissues, anatomical basis of pain, sensory systems, two systems of pain nerves in the skin, erythralgia, nocifensor tenderness, cutaneous tenderness and nerve injuries, pain and tenderness in ischaemic muscle,

excitants of pain nerves, referred pain, pain of visceral disease, and clinical use of pain. Bibliography of 253 titles.—*W. S. Hunter* (Brown).

3921. Licklider, J. C. R., & Kryter, K. D. Frequency-localization in the auditory cortex of the monkey. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 51.—Abstract.

3922. Livshitz, N. N. On the laws of binocular colour mixture. *C. R. Acad. Sci. U.R.S.S.*, 1940, 28, 429-432.—[Abstracted review; original not seen.] Under certain conditions the same relationships prevail for monocular and binocular color mixture.—*H. L. Ansbacher* (Brown).

3923. Lowy, K. Cancellation of the electrical cochlear response by simultaneous stimulation with air- and bone-conducted sound. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 51-52.—Abstract.

3924. Marshall, W. H., & Talbot, S. A. Recent evidence for neural mechanisms in vision leading to a general theory of sensory acuity. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 117-164.—The minimum separation for two-point discrimination is a measure of sensory acuity which may be described in terms of the mosaic of discrete end organs (visual, auditory, or tactile). For larger patterns or contours in the visual system, however, acuity is such that it cannot be accounted for without considering spatial and temporal summation in the retina, the geniculate, and the striate cortex. Among the factors influencing contour discrimination are (1) diffraction by the optical media, (2) the normal flutter movements accompanying fixation, (3) reciprocal overlap between pathways, (4) the neural recovery cycle, (5) "amplification" of weak neural impulses by multiplication of unit visual pathways at the geniculate and cortical levels. Application of such principles yields an explanation for acuity as found in the hairline, vernier, and various patterns which involve the appreciation of details finer than the receptor mosaic.—*L. A. Riggs* (Brown).

3925. Moehres, F. P. Untersuchungen über die Frage der Wahrnehmung von Druckunterschieden des Mediums; Versuche an Bodenfischen. (Investigations on the perception of water-pressure differences; experiments on groundlings.) *Z. vergl. Physiol.*, 1940, 28, 1-42.—Thigmotaxis and phototaxis play a part in the sensory orientation of groundlings, but preference for the ground position must be regarded to be as fundamental as orientation to water-pressure. Bubbling provides a cue for great sensitivity to changes in pressure. Operative elimination of sensation in the labyrinth, especially the *pars inferior*, results in diminution of sensitivity to the bubbling reaction. The labyrinth must therefore be regarded as an organ of pressure perception, aside from any possible role in hearing.—*G. M. Gilbert* (Bard).

3926. Polyak, S. L. Anatomy of the retina. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 193-202.—The outer

nuclear layer of the retina is composed of rod and cone cells, the photoreceptors proper. The inner nuclear layer includes the horizontal cells, 3 or 4 types of bipolar cell, and amacrine cells. Ganglion cells of 5 or more types form the third category of retinal structures. All of these structures vary considerably in form, but functionally they exhibit activity characteristic of nerve cells in general. In their complexity of interconnections they resemble the brain, from which they are indeed derived both ontogenetically and phylogenetically.—*L. A. Riggs* (Brown).

3927. Rashevsky, N. An alternate approach to the mathematical biophysics of perception of combinations of musical tones. *Bull. math. Biophys.*, 1942, 4, 89-90.—In connection with a previous paper on the same subject [see XVI: 2191] this different approach to the problem is outlined, which also leads to an expression for pleasantness values of different binary combinations of musical sounds.—(Courtesy *Bull. math. Biophys.*).

3928. Ridgeway, E. H. A summary of the cases examined in the eye clinic of the New Jersey state colony at New Lisbon. *Amer. J. Optom.*, 1942, 19, 261-269.—511 cases were examined in respect to refractive conditions and binocular coordinations wherever sufficient cooperation could be obtained. 60% showed refractive errors, but only 40% had acuity of less than 20/20. About 15% might have benefited by orthoptic exercises. The incidence of anomalies appeared to be little higher than in an unselected group of comparable age.—*M. R. Stoll* (Lowell, Mass.).

3929. Sato, S. [Auditory rivalry.] *Z. Otol.*, Tokyo, 1940, 46, 79-80.—[Abstracted review; original not seen.] The author stimulated alternately one ear with one tuning fork and both ears with two tuning forks. Rivalry can be demonstrated whether the two tuning forks sound the same or different notes. At an interval of over 2 octaves between the notes, however, no rivalry was observed. The interval between sounding of the forks and the onset of rivalry ranged on the average from  $2.8 \pm .30$  sec. to  $7.84 \pm .31$  sec. indicating large individual differences. German summary.—*H. L. Ansbacher* (Brown).

3930. Science Service. How to use your eyes at night. *Infantry J.*, 1942, 51, No. 2, 38-41.—This article is based on material furnished by the National Research Council. It is a general discussion of dark adaptation, scanning, acuity, contrast, and similar topics with which it is felt every man should have some degree of familiarity. In particular, the use of red goggles, red light, or a patch over one eye is discussed as a substitute for waiting in the dark for good night vision. In summary, there are listed seven simple rules for using the eyes at night.—*N. R. Bartlett* (Brown).

3931. Sheard, C., & Bair, H. L. Rod and cone dark adaptation in total color blindness and in macular degeneration. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 79-80.—Abstract.

3932. Smith, K. U. Monocular and binocular fusion in movement and depth perception after section of the commissures of the cerebral cortex. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 81-82.—Abstract.

3933. Snider, R. S., & Stowell, A. Evidence of a representation of tactile sensibility in the cerebellum of the cat. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 82.—Abstract.

3934. Stowell, A., & Snider, R. S. Evidence of a representation of auditory sensibility in the cerebellum of the cat. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 84.—Abstract.

3935. Studnitz, G. v. Das Absorptionspektrum der Zapfensubstanz. (The absorption spectrum of the visual cone substance.) *Z. vergl. Physiol.*, 1940, 28, 153-164.—A volatile solution of the cone substance was obtained from the retinas of ring-snakes (10 cc. from 190 retinas), free of visual purple or oil globules. The spectral absorption-curve was then tested on the Pulfrich colorimeter. There were 3 maximal-absorption points: at 468 m $\mu$ , 555 m $\mu$ , and 655 m $\mu$ . The absorption curve shows that there is not one but a complex of 3 cone-substances: red, yellow, and blue, and that their absorption curves correspond roughly to the component color curves in the color-mixture spectrum in human color vision. The chief difference is a narrower range of effectiveness for each curve in the spectrum. The red-substance is effective from the long-way extreme to about 540 m $\mu$ ; yellow, from 625 m $\mu$  to 490 m $\mu$ ; blue, from 540 m $\mu$  to the violet end, so that there is no overlapping between blue and red. No particular substance corresponds to the curve of green sensitivity, but the yellow and blue substances respond in their respective ranges. The strength of absorption corresponds not to intensity but to quality.—G. M. Gilbert (Bard).

3936. Studnitz, G. v. Ölkugeln, Zapfensubstanz, und Farbensehen. (Oil globules, cone substance, and color vision.) *Z. vergl. Physiol.*, 1940, 28, 165-179.—Leghorn chicks after a brief period of dark adaptation, were stimulated by various monochromatic light rays. Their isolated retinas were then either further stimulated by the same rays, or further dark adapted. All 3 types of oil globules (corresponding to red, yellow, and green-yellow sensations) were extracted from all retinas with ether, and the absorption of the retinas was tested in 10 regions of the spectrum between 434 m $\mu$  and 729 m $\mu$ . The results showed that a regeneration of the oil-globule-substance takes place during darkness. Green and blue are mediated by the same color substance.—G. M. Gilbert (Bard).

3937. Talbot, S. A. A lateral localization in cat's visual cortex. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 84.—Abstract.

3938. Vinacke, W. E. The discrimination of color and form at levels of illumination below conscious awareness. *Arch. Psychol.*, N. Y., 1942, No. 267. Pp. 53.—This study employed levels of illumina-

nation from well below visibility to above threshold, but differed from previous experiments on subliminal visual stimulation in that it utilized the dark-adapted eye, and color as well as form in the stimuli, and took account of the transition between subliminal and supraliminal stimulation. O's reported whether they were conscious of the stimulus on the screen, and how confident they were of their reports of color or form or combinations of these. During any part of the experiment O knew the 2 possible stimuli and always gave a complete report, guessing when necessary. "In general . . . perception without conscious awareness does not exist for a dark-adapted eye except perhaps to a slight extent under the most favorable conditions . . . where the judgment calls for color or form alone." "Judgments of stimuli slightly below the form and color thresholds, even when these are also below the momentary conscious threshold, are more accurate than chance would allow."—C. E. Buxton (Northwestern).

3939. Voll, M. M. [Warmth and cold threshold in children in spring and fall.] *Pediatria, Mosk.*, 1940, No. 7/8, 8-12.—[Abstracted review; original not seen.] The experiments were conducted on 22 Moscow pupils, 10-11 years old, at the end of March and the end of September. In most of the subjects cold sensitivity was lower in spring than in fall and warmth sensitivity lower in fall than in spring. The results were obtained on forearm, back, and forehead.—H. L. Ansbacher (Brown).

3940. Wald, G. Visual systems and the vitamins A. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 43-71.—A visual cycle of which vitamin A is a constituent furnishes the basis for an understanding of normal vision as well as night blindness. Spectrophotometric analysis reveals that there is a difference between the retinal vitamin A of freshwater fish on the one hand and most saltwater fish and land vertebrates on the other. Paralleling this difference are differences in the other two elements of the cycle, the carotenoid retinene and the original photosensitive substance (visual purple). The latter is referred to as rhodopsin in marine and land vertebrate retinas, porphyropsin in the retinas of freshwater fish, and iodopsin in the predominantly cone retina of the chicken.—L. A. Riggs (Brown).

3941. Wald, G., Krieger, H. P., & Goodman, H. C. Respiratory effects upon the visual threshold. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 88.—Abstract.

3942. Walls, G. L. The visual cells and their history. In *Klüver, H., Visual mechanisms*. Lancaster, Pa.: Jacques Cattell, 1942. Pp. 203-251.—A detailed consideration of the development of retinal cells reveals that they have not evolved along a smooth pathway of improvement from the earliest evolutionary forms. Early placental animals, for example, lacked the color vision and the fine accommodative mechanism of their reptilian ancestors. Even in man the accommodative mechanism is inferior to that of *Sauropsida*; and only the highest

of the primates have regained a degree of the color vision which was lost with the disappearance of oil droplets from early cone receptors.—*L. A. Riggs (Brown).*

**3943. Walzl, E. M., & Woolsey, C. N.** Effects of cochlear lesions on click responses in the auditory cortex of the cat. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 88.—Abstract.

**3944. Weber, C. O.** Effects of practice on the perceptual span for letters. *J. gen. Psychol.*, 1942, 26, 347-351.—20 subjects were given 12 daily practice periods with materials designed to improve the perceptual span. Both before and after this practice, the horizontal and vertical perceptual spans were measured. In the final test there was a gain in the number of capital letters reported as well as a decrease in the number of errors as compared to the initial test. There was likewise a gain in the size of the span in both directions. The results are discussed with reference to problems of reading.—*C. N. Cofer (George Washington).*

**3945. Weddell, G.** The multiple innervation of sensory spots in the skin. *J. Anat., Lond.*, 1941, 75, 441-446.—(*Biol. Abstr. XVI*: 14783).

**3946. Wever, E. G., & Bray, C. W.** The stapedius muscle in relation to sound conduction. *J. exp. Psychol.*, 1942, 31, 35-43.—"The function of the stapedius muscle was investigated by artificially reproducing its action and observing the effects upon the electrical responses of the cochlea. Tension applied through a thread attached to the stapedius tendon causes a marked reduction in transmission for low tones, a smaller reduction for high tones, and for certain tones of the middle range a preliminary improvement and then a considerable decline. The results thus show that in general the stapedius muscle, like the tensor tympani, operates so as to protect the inner ear against over-stimulation. A further effect of tension on the stapedius tendon is a significant alteration of the pattern of distortion of the ear."—*M. J. Zigler (Wellesley).*

**3947. Wheeler, M. C.** The history of orthoptics. *Amer. J. Ophthal.*, 1942, 25, 569-576.—A review of the early history of orthoptic training, with a discussion of the orthoptic clinics existing in modern hospitals.—*D. J. Shaad (Lawrence, Kansas).*

**3948. Wolff, H. G., Hardy, J. D., & Goodell, H.** Studies on pain; measurement of the effect of ethyl alcohol on the pain threshold and on the "alarm" reaction. *J. Pharmacol.*, 1942, 75, 38-49.—The pain threshold was measured by irradiating 3.5 cm. of skin for 3 seconds. The maximum effect was attained with the drinking of 30 cc. alcohol, which raised the threshold about 45% within 40 minutes, the effect lasting 2-3 hours. The action of alcohol was less predictable, quicker, and of shorter duration than that of aspirin. The combination of the two had the advantages of the psychological dissociative action of alcohol plus the longer effect of aspirin. An individual's pain threshold remains remarkably constant, but his reaction to pain (alarm) varies widely. As measured by skin resistance, alcohol had

an immediate and dramatic effect on the alarm reaction to a heat stimulus. 30-40 cc. of alcohol raised the threshold 85% above the control pain threshold and 780% above its own control level. The dissociation between pain perception and alarm reaction is important in evaluating the action of analgesics. Some (e.g. salicylates) affect chiefly the pain threshold; others (opiates, alcohol) affect also the reaction pattern.—*M. E. Morse (Baltimore, Md.).*

[See also abstracts 3877, 3897, 3985, 4005, 4018, 4093, 4139, 4146, 4151, 4153, 4156, 4157, 4159.]

#### LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

**3949. Allen, W. F.** Cortical irradiation in conditioned differentiation as measured by effects on respiration. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 2-3.—Abstract.

**3950. Bennett, G. K., & Cruikshank, R. M.** Sex differences in the understanding of mechanical problems. *J. appl. Psychol.*, 1942, 26, 121-127.—Bennett's Test of Mechanical Comprehension, Form AA, was given to 390 girls and 338 boys of comparable age and education from the 10th to the 13th grade. The mean scores for the boys were much higher than those for the girls. No item was found easier for the girls but in several items the sex differences were small.—*W. F. Madden (Middlebury).*

**3951. Bernard, J.** The specificity of the effect of shock on the acquisition and retention of motor and verbal habits. *J. exp. Psychol.*, 1942, 31, 69-78.—In view of the fact that administration of electric shock for some errors was previously found to increase the rate at which errors were eliminated in learning a stylus maze, the attempt was made to see if this was true for learning (1) in a stylus maze of different pattern and (2) in a verbal maze. Data for learning, recall, and relearning for 62 undergraduates, with shock being administered for some but not all errors, are reported. The results in no case revealed that shocked errors were eliminated significantly more quickly in learning, recall, and relearning tests, in fact, in the verbal maze shocked errors tended to persist somewhat longer than the non-shocked errors. These results are at odds with the earlier findings of Bernard and Gilbert (see XV: 2128).—*M. J. Zigler (Wellesley).*

**3952. Blumenfeld, W.** A note on Dr. Cartwright's article on decision-time. *Psychol. Rev.*, 1942, 49, 387-390.—Cartwright's theory (see XV: 4991), assuming a quantitative relation between the duration of decision-time and the resultant of the forces in the field acting upon the individual, is questioned. Decision-time can only be taken as a sign, not as a measure of conflict. Also, an imbalance does not always hasten decision. The factors which cause an imbalance of forces capable of bringing about a

decision should be more completely analysed.—*A. G. Bills* (Cincinnati).

3953. Cartwright, D. The effect of interruption, completion, and failure upon the attractiveness of activities. *J. exp. Psychol.*, 1942, 31, 1-16.—Subjects were required to make preference ratings of 12 tasks, 4 each of peg puzzles, mathematical problems, and jigsaw puzzles, both before and after engaging in some of the tasks. The subjects' performances were terminated in 3 ways: interruption, completion, and failure (task completed but subject was told he had done very poorly). "Interrupted tasks were rated as more attractive after interruption than before by 42 percent of the subjects, less attractive by 22 percent, and equally attractive by 36 percent. Completed tasks were rated as more attractive after completion by 44 percent of the subjects, less attractive by 49 percent, and equally attractive by only 7 percent. After failure 24 percent of the subjects rated the performed tasks as more attractive, 52 percent as less attractive, and 24 percent left it unchanged."—*M. J. Zigler* (Wellesley).

3954. Cartwright, D. Psychological forces in the determination of decision-time and Dr. Blumenfeld's criticism. *Psychol. Rev.*, 1942, 49, 391-394.—Blumenfeld's (see XVI: 3952) three criticisms are listed and answered. It was the author's purpose to formulate an operational definition of conflict. Oscillations of judgment are allowed for by assuming that the imbalance of forces must exceed a certain threshold value, before a final judgment can be reached.—*A. G. Bills* (Cincinnati).

3955. Diebschlag, E. Über den Lernvorgang bei der Haustaube. (On the learning process in the pigeon.) *Z. vergl. Physiol.*, 1940, 28, 67-104.—The pigeon is capable of learning problems in visual orientation to obtain food, by trial and error, and to remember them for as long as 11 months. In some kinds of serial learning pigeons are superior to mammals. However, there is a tendency to stereotypy and rigidity in serial learning, which renders them inferior to mammals in adaptability of learning and performance. They are thrown off by the slightest variation in procedure, and take twice as long to learn a new arrangement of a previously learned problem as the original problem required. Mammals generally require less time for a new version of an old problem. Contrary to Beritov and Chichinadze the author finds that changing from left to right eye (by covering), or from either to both, does not affect performance on a learned procedure.—*G. M. Gilbert* (Bard).

3956. French, J. W. The effect of temperature on the retention of a maze habit in fish. *J. exp. Psychol.*, 1942, 31, 79-87.—Goldfish learned a 4-blind linear maze at 22°C until the criterion of 5 consecutive errorless trials was reached. After being kept 20 hours, some at 28°, others at 16°, and still others at 4° C, they were given 4 relearning tests on successive days at 22°. The functions exhibiting average number of errors as a function of time were

all declining functions, with that for the 28° group highest and that for the 4° group lowest, the former making almost twice as many errors during relearning as the latter. The function for the 16° group was intermediate but hovered nearer that for the 4° group. The rate of change for all functions was most rapid at first, then progressively less rapid. Control experiments were made to show that this outcome was due to the influence of temperature on retention and not due to its action on the rate of learning, and to show that these results are not to be ascribed to retroactive inhibition produced by general activity during the period of controlled temperature.—*M. J. Zigler* (Wellesley).

3957. Gantt, W. H. Cardiac conditioned reflexes to painful stimuli. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 28.—Abstract.

3958. Girden, E. Striate and autonomic components of conditioned reflexes established under erythroidine and curare. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 30.—Abstract.

3959. Haire, M. Some experimental data relevant to field and associative theories of discriminative learning. *J. gen. Psychol.*, 1942, 26, 267-288.—5 deductions made by Spence (see X: 5785) are examined in the light of available data on discriminative learning. A brief account of and predictions from field theory in these cases are also presented. In a few instances the deductions from both theories were the same, but in most they were different. (The author found it necessary to extend Spence's theory in order to make some of the predictions.) The evidence cited in cases where the two theories make different predictions is said to support those made from field theory.—*C. N. Cofer* (George Washington).

3960. Harlow, H. F., & Bromer, J. A. Acquisition of new responses during inactivation of the motor, premotor, and somesthetic cortex in the monkey. *J. gen. Psychol.*, 1942, 26, 299-313.—Inactivation of these areas in 4 monkeys was produced with ethyl chloride, and during this inactivation paired presentations of a bell (CS) and shock to the left leg (UCS) were made. In 4 control animals, the procedure was the same except that in one neither the bell nor the shock was presented and in the others only the shock was given thus allowing for a check on formation of pseudo-conditioned responses. After recovery, the 4 experimental animals showed responses (eyelid, arm, head, general bodily movements) which differed considerably from the UCR (chiefly in the lower half of the body) to shock. The animal which received neither bell nor shock stimulation showed no responses after recovery to the bell; in the other 3 controls there was evidence of pseudo-conditioning. The data are interpreted as opposing a peripheral learning theory (Guthrie) and as supporting an intracerebral one.—*C. N. Cofer* (George Washington).

3961. Henle, M. An experimental investigation of dynamic and structural determinants of substitution. *Contr. psychol. Theor.*, 1942, 2, No. 3. Pp.

v + 112.—After a discussion of the problem of substitution and its history, a series of 15 experiments is reported testing the hypothesis that the substitute value of a task is determined by its similarity and proximity to the previous unfinished task. The materials used were anagrams, jigsaw puzzles, mazes, and the like. The results, obtained from 1 to 21 subjects to an experiment, are expressed in terms of percentages of resumption and evaluated by the  $\chi^2$  technique. Similarity, in the sense of the uniqueness of the two tasks in a series, produced more substitution than if the two tasks were not unique, provided previous success with, and high preference (valence) for the interrupted task were avoided, since both these factors favored resumption rather than substitution. When the tasks were adjacent in a series, there was more substitution than if they were separated, provided that the factors of success, valence, and similarity were controlled. The conclusion is reached that here, as in the fields of learning, memory, and thought, similarity and proximity are factors which determine the "organization of tension systems."—D. C. McClelland (Wesleyan).

3962. Karwoski, T. F., Odberg, H. S., & Osgood, C. E. Studies in synesthetic thinking: II. The rôle of form in visual responses to music. *J. gen. Psychol.*, 1942, 26, 199-222.—In one experiment, photistic visualizers and unselected subjects drew forms suggested to them by a series of 12 short, simple clarinet selections. The responses of the 2 groups did not differ markedly (although the patterns of the visualizers tended to be somewhat more abstract). In either group, the responses fell into types which could be reduced to verbal terms; opposite stimulus characteristics tended to produce opposite visual forms (and thus opposite verbal translations). 10 verbalized form polarities (opposites), 4 musical polarities, and 6 mood polarities were then selected, and each form polarity was paired with each music-mood polarity in random order (100 combinations). 100 S's were asked to underline one word of a music-mood polarity which resembled one word of the form polarity. A high degree of agreement in the resemblances indicated was obtained as well as of agreement with relations found in photistic visualization. This agreement was present despite disagreement in reasons given for the same response. Clusters of polarities are shown graphically. In a theoretical summary, there is discussion of the term synesthesia, and some principles of color hearing are presented. Implications of the latter for problems of thinking are stressed.—C. N. Cofer (George Washington).

3963. Lashley, K. S. An examination of the "continuity theory" as applied to discriminative learning. *J. gen. Psychol.*, 1942, 26, 241-265.—This is a theoretical and experimental examination of Spence's continuity theory of discriminative learning (see X: 5785). After analyzing the theory, the author reports a repetition with rats of an experiment by Spence (see XI: 2673). While the results in general confirm those obtained by Spence, the

writer advances reasons that they may not be regarded as a crucial test of the hypothesis. Further experiments were made to determine "whether all stimuli acting at the time of response become associated with the response or whether the set of the animal determines a selective association." Rats were trained to discriminate two circles on the basis of size, and then were given much training in discriminating a large triangle from a small circle. Tests with a triangle and a circle of equal surface area showed no evidence of discrimination which indicates that the cue of shape was not associated with the discriminative response since the animals were working under a set for size. There is further discussion in the light of these findings and results from earlier work of problems in discriminative learning theory.—C. N. Cofer (George Washington).

3964. Lehman, H. C., & Gamertsfelder, W. S. Man's creative years in philosophy. *Psychol. Rev.*, 1942, 49, 319-343.—A canvas of over 50 standard histories of philosophy yielded age curves showing that (1) the average age at which 52 outstanding philosophers produce their leading book and the majority of their outstanding works is 35-39 inclusive, although the total range is 22-80, (2) similar results hold for 120 minor philosophers, (3) when all works are considered, however, the production curve is relatively flat from 32½ to 72½ inclusive. Hence the age range for quantity is wider than that for quality. An analysis of the different types of treatise, i.e. logic, ethics, aesthetics, social philosophy, metaphysics, and general, shows that all but the fourth and fifth conform to the general rule. In the case of metaphysics, the curve has its peak at 40-49. These results in general corroborate the statement of R. S. Woodworth in his *Dynamic psychology*, 1918.—A. G. Bills (Cincinnati).

3965. Lynch, J. A. The stimulus as a series of contexts for practice. *J. gen. Psychol.*, 1942, 26, 223-239.—"In previously published papers . . . I have made use of a summation sign to represent a series of effects from practices which add up to something. In those papers, I was not so much concerned with giving an exact value to that sum as with the problem of incorporating the factor of repetition in the concept of the stimulus and in giving this concept the character of a single entity capable of being conveniently manipulated. In the present paper, I shall attempt to do two things mainly: first, to show how this sum can be given more exact quantification; and second, to isolate a concept of accrued readiness as a part of the general scheme."—C. N. Cofer (George Washington).

3966. MacCorquodale, K. The effects of pattern interruption on maze performance. *J. comp. Psychol.*, 1942, 33, 363-369.—The purpose of this experiment was "to determine whether the Gestalt theory of learning or the older associationism was more efficient and sufficient in explaining the behavior of the white rat in the maze situation." Two groups of rats learned a 12-unit maze. For the control group units 6 and 7 were a straight

runway, while for the experimental group these units were changed daily so that it was impossible to learn the correct turns in them. The other units were the same for both groups. The results showed that the first 5 units, and still more the last 5, were learned more easily by the control group. The differences between the two groups are explained as being due to "the effect of the two inconstant central units in impairing or destroying the intrinsic relationships of the remaining elements. Insofar as the maze situation constitutes a field whose elements are more or less well-structured, the explanation for the results of this experiment must be in terms of field theory."—K. F. Muensinger (Colorado).

3967. McClelland, D. C. Studies in serial verbal discrimination learning. I. Reminiscence with two speeds of pair presentation. *J. exp. Psychol.*, 1942, 31, 44-56.—"96 subjects learned 20-pair serial verbal discrimination lists on two separate days, the first for practice. 48 subjects (groups A and B) learned at a 4-second rate of presentation and 48 (group C and D) at a 2-second rate. For 24 subjects of each 48 (groups B and D) a rest period of 2 minutes for a steadiness test was interpolated after they had reached a criterion of 15 correct choices out of a possible 20. The other 24 subjects of each 48 (groups A and C) continued learning as before to mastery without interruption. Learning by this method was significantly harder at a 2- than a 4-second rate of presentation. No reminiscence was obtained after a 2-minute rest if the presentation rate was 4 seconds. If the rate was 2 seconds, reliable reminiscence was obtained as measured by relearning scores. The reminiscence obtained cannot readily be explained according to the usual differential rate of forgetting hypothesis. . . . An alternative hypothesis . . . is that reminiscence is due to a recovery with rest from an inhibition which results from conflict between recitation responses required, and which ordinarily keeps performance below the level of true learning."—M. J. Zigler (Wellesley).

3968. Mellone, M. A. An investigation into the relationship between reading ability and IQ as measured by a verbal group intelligence test. *Brit. J. educ. Psychol.*, 1942, 12, 128-135.—To determine the validity of verbal group intelligence tests as used with young children lacking reading development and older pupils with reading disabilities, groups of children aged 8-11 years were given a verbal group test (Moray House Test 26), a non-verbal group test (Sleight), and an individual mechanical reading test (Burt's Graded Word Reading Test). Only in the 8-year-old group was the mean verbal IQ significantly lower than the mean non-verbal IQ. Analysis of variance showed highly significant differences in the mean verbal IQ between the 4 age groups, which were not evident in the case of the mean non-verbal IQ. It was concluded that the verbal test does not measure the true IQ until the age of 9½ years, and that lack of reading facility in the youngest children tends to interfere with performance.—R. C. Strassburger (St. Joseph's College for Women).

3969. Mote, F. A., Jr., & Finger, F. W. Exploratory drive and secondary reinforcement in the acquisition and extinction of a simple running response. *J. exp. Psychol.*, 1942, 31, 57-68.—The performances of rats in learning tests on a simple elevated runway were observed with respect to the influence of eliminating the reinforcing agent (food) when the goal box was reached (Group I), and the effect of giving no reinforcement while substituting an unfamiliar goal box for the one used in the acquisition trials (Group II). Measurements regarding latent period of reaction, running time for each trial, and number of extinction trials, all indicate the existence of a stronger response tendency in Group I than in Group II rats. "The results indicate that the rats are impelled by some exploratory drive to make the running response even if reinforcement is never experienced in the situation. This factor may complicate the quantitative specification of learning by requiring consideration of an additional parameter. The fact that Group I responds more strongly than Group II is interpreted as an indication that the presence of a familiar goal box may provide a significant amount of secondary or sub-goal reinforcement."—M. J. Zigler (Wellesley).

3970. Peixotto, H. E. Intraserial inhibition as measured by reproduction. *J. exp. Psychol.*, 1942, 31, 17-34.—16 nonsense syllables were arranged in lists of different lengths for learning by the method of paired associates. The positions of pairs of syllables were rotated in the different series so that the relative influence of position upon reproduction could be ascertained. Results were obtained from 504 subjects. The inhibitory effect of serial position was determined through analysis of the number of correct responses for each syllable in the learning order and for each position in the recitation order. Both are graphically exhibited.—M. J. Zigler (Wellesley).

3971. Rosen, V. H., & Gantt, W. H. The effect of metrazol convulsions on conditioned reflex training in dogs. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 74-75.—Abstract.

3972. Skitsky, V. L. Probability in the relationship between instances and generalizations. Ann Arbor, Mich.: University Microfilms, 1942. Pp. 188. \$2.35.—See *Microfilm Abstracts*, 1942, 4, No. 1, 56-59.

[See also abstracts 3900, 3944, 3979, 4017, 4037, 4042, 4087, 4099, 4150, 4187, 4188, 4208.]

#### MOTOR AND GLANDULAR RESPONSES

(incl. Emotion, Sleep)

3973. Arnold, M. B. A study of tension in relation to breakdown. *J. gen. Psychol.*, 1942, 26, 315-346.—Two problems are raised in this paper: that "individuals react to the same situation with different degrees of muscular tension"; and "that the tenser individual will break down sooner under increased strain." 22 commercial school students

tapped and wrote shorthand from dictation which was gradually more rapid, while pressure in each hand was measured. Individual differences were found which were consistent when certain conflicting factors were considered. "Efficient performance was . . . associated with (a) low or moderate left pressure, (b) decreasing left pressure, (c) high right pressure, (d) increasing right pressure." Breakdown was "directly and significantly related to left pressure, and slightly to right pressure" and was inversely related to skill, intelligence, and average school standing. Performance in different tasks showed a small degree of relation. In tentative explanation of the results there is postulated "a learned energy distribution in the individual which would normally lead to differential increase of specific over general tension. As energy distribution becomes habitual, tension measurements may be assumed to represent an index of the present reactive attitude and can be used to estimate the probable limits of efficient energy distribution."—C. N. Cofer (George Washington).

**3974. Bertocci, P. A. A critique of Prof. Cantril's theory of motivation.** *Psychol. Rev.*, 1942, 49, 365-385.—An analysis of Cantril's 'purely functional' explanation of motivation, as opposed to instinctive or biological explanations, uncovers certain defects. (1) If behavior is a function of the interaction of cultural environment and predispositions, how explain social leaders, and revolutionaries, who change the cultural patterns? (2) Can three basic needs, food, sex, and shelter, modified by later cultural influences, explain the complexity of individual adult motivation? Cantril is himself forced to appeal to an additional 'desire for meaning' motive. (3) Cantril's revision of G. W. Allport's 'functional autonomy of motives' theory, which adds that "derived drives are autonomous of their origins, but not autonomous of the ego," is inadequate because it refers to a culturally derived ego, rather than the pre-cultured ego. We must go back for anchorage to an underlying complex of psychophysiological activities which can act as a selective agent in accepting or rejecting values imposed by the cultural patterns. This means returning to some such concept as the propensities or instincts of McDougall.—A. G. Bills (Cincinnati).

**3975. Breuninger, M. Über den Schichtschlaf.** (On the sleep of night-shift workers.) *Z. ges. Neurol. Psychiat.*, 1941, 171, 591-606.—According to the author's observations in a special clinic for sleep disturbances in night-shift workers, restful sleep basically depends upon mental quietude rather than on freedom from external noises during the darkness of night. Neither sleeplessness nor any other signs of unrest were found in rotating shift workers who were physically fit and satisfactorily adjusted. Whenever sleep disturbances occurred, they were observed in workers who had been poor sleepers even under ordinary working conditions or had shown other symptoms of resentfulness, restlessness, and general maladjustment. Reeducation through psychotherapy rather than abandonment of

night shifts in essential industries is recommended for this modern form of sleeplessness.—F. J. Kallmann (New York State Psychiatric Institute).

**3976. Cooper, W. E., & Bonney, M. E. The validity and reliability of the Van Riper Critical Angle Board in diagnosing handedness.** *J. appl. Psychol.*, 1942, 26, 352-358.—The performance on this test was checked against hand preference in dart throwing, pitching bean bags, and putting pegs in a board. 30 right-handed pupils and 30 predominately left-handed children were used. Correlations between the Van Riper Board and the total scores of the other 3 tests were  $.98 \pm .004$  for left-handed, and  $.93 \pm .015$  for right-handed children. The reliability was  $.90 \pm .02$  for right-handed and  $.98 \pm .02$  for left-handed children.—W. F. Madden (Middlebury).

**3977. Courts, F. A. Relations between muscular tension and performance.** *Psychol. Bull.*, 1942, 39, 347-375.—This review is concerned with two topics: the influence of experimentally induced muscular tension on performance, and the changes in muscular tension which accompany various performances. Part I discusses the amount of induced tension, locus of induced tension, the observed performance, practice effects, volitional and motivational factors, individual differences, and hypotheses concerning the effects of induced tension. Part II discusses tension accompanying continuous work, frustration, learning, set and muscular activity, and subjective phenomena. The review covers 82 articles most of which appeared since 1936.—F. McKinney (Missouri).

**3978. Davis, R. C. Methods of measuring muscular tension.** *Psychol. Bull.*, 1942, 39, 329-346.—This is a review of 72 titles. The devices used to measure tension are classified as (1) those applying external force mechanically and recording resistance to movement offered by limb or muscle, (2) those recording slight movements of parts of the body, (3) those eliciting reflex responses, (4) those requiring the subjects to perform some voluntary response, (5) those recording electrical properties of the skin, (6) those recording the electrical properties of the muscles.—F. McKinney (Missouri).

**3979. D'Oliveira Esteves, J. V. [Method for the quantitative and qualitative evaluation of a test of combined physical and mental work.]** *Rev. med. lat-amer.*, 1941, 26, 618-628.—[Abstracted review; original not seen.] A technique is described for determining the total output of mental and voluntary muscular work, either separately or combined. Muscular work is evaluated by the number and intensity of muscular contractions as recorded graphically. Various types of response are described which are related to various physicomental types of individual: (1) in the indifferent type both output and quality of mental and muscular work are no different when the tasks are performed combined from when either task is undertaken separately; (2) the positive amphotropic shows an increase of both mental and muscular work when the tasks are

performed in combination; (3) the negative amphotropic shows a decrease under these conditions; (4) the psychotrope shows increase of mental work with diminution of physical work; and (5) the ergotrope shows increase of muscular work with diminution of mental work.—C. Pfaffman (U. S. Naval Reserve).

3980. Drever, J. Instinct as impulse. *Brit. J. educ. Psychol.*, 1942, 12, 88-96.—Considered in its original fundamental sense as impulse, the concept of instinct is essential to any adequate interpretation of animal and human behavior. In this connotation it corresponds to the more recent term drive, although the latter is not limited to congenital impulses. The presence of congenital drives at the human level is demonstrable in terms of the criteria of universality and manifestation independently of learning. Ample data are available in the form of the many products of human activity whose source is found in human impulses conditioned by environmental factors. Conceived as impulse, instinct is an essential adjunct to intelligence throughout the animal scale. McDougall's view of instincts as psychophysical dispositions is open to misconstruction, and is to be avoided. The optimism expressed by Burt as to the value of factorial analysis in the study of instinct appears unjustified, and Thorndike's hope for a solution of the problem in a fuller knowledge of physiological inheritance is not warranted in view of past and present experience with the results of physiological investigation.—R. C. Strassburger (St. Joseph's College for Women).

3981. Foltz, E., Ivy, A. C., & Barborka, C. J. The use of double work periods in the study of fatigue and the influence of caffeine on recovery. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 25.—Abstract.

3982. Gemmill, C. L. The effects of lowered barometric pressure on man. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 29.—Abstract.

3983. Hall, C. S., & Klein, S. J. Individual differences in aggressiveness in rats. *J. comp. Psychol.*, 1942, 33, 371-383.—"The general plan of the experiment consisted of placing two rats together in a cage for five minutes and rating them for aggressiveness according to a scale. . . . Three groups of rats, ten in a group, were tested. Each rat was paired with every other rat twice under the same experimental conditions, once in its own living cage and once as a visitor to the other rat's home cage." The results indicate that aggressiveness is a fairly stable trait in which individual rats differ markedly. The rats of a non-emotional fearless strain were considerably more aggressive than those of an emotional timid strain. "Since these two strains have been established by selective breeding, it is evident that genetic [and not environmental] factors are the cause of the obtained dichotomy in aggressiveness." —K. F. Muenzinger (Colorado).

3984. Halliday, J. L. Psychological aspects of rheumatoid arthritis. *Proc. R. Soc. Med.*, 1942, 35, 455-457.—"The psychological characteristics com-

mon to all persons in this series were marked emotional self-restriction (present in all cases and often suggested in the facies and manner) and marked obsessional trends (with perhaps one exception)." —J. E. Zerga (U. S. Employment Service).

3985. Herter, K. Über Vorzugstemperaturen von Reptilien. (Temperature preference of reptiles.) *Z. vergl. Physiol.*, 1940, 28, 105-141.—Experiments on 25 species of reptiles (lizards and snakes) showed that temperature preference is a hereditary characteristic of different species, and is related adaptively to the life-habits and habitat of the species. Lizards generally prefer higher temperatures than snakes of the same life-habits, and younger lizards prefer higher temperatures than older ones. The geographical distribution of the various species corresponds in general to their temperature preference, as does their altitude distribution in mountainous country. The preference appears to be transmitted genetically in the same manner as body color, but just what physical characteristics determine it, is not known.—G. M. Gilbert (Bard).

3986. Jellinek, E. M. An outline of basic policies for a research program on problems of alcohol. *Quart. J. Stud. Alcohol*, 1942, 3, 103-124.—This statement, based on an extensive review of the effects of alcohol on the individual, was adopted as the basis for the research policies of the Research Council on Problems of Alcohol. Important areas of research are subsumed under sociology, psychiatry and clinical psychology, physiology, experimental psychology, alcoholic diseases.—W. L. Wilkins (U. S. Marine Corps Base, San Diego, Calif.).

3987. Kisilstein, J. A. [The effect of altitude on the inner ear of man.] *Vestn. Otol.*, 1939, No. 5, 92-95.—[Abstracted review; original not seen.] 26 aviators served as subjects. An altitude of 2500 m. had no effect on the latent period and duration of nystagmus. In altitudes of 5000-5500 m. most subjects manifested reduction in latent period and increase in duration. In 6 subjects the latter changes persisted for a short while after descent. No noticeable changes in auditory acuity were observed.—H. L. Ansbacher (Brown).

3988. Kretschmer, E. Der Tonus als Konstitutionsproblem. (Tonus as a constitutional problem.) *Z. ges. Neurol. Psychiat.*, 1941, 171, 401-407.—Psychogalvanic skin measurements taken 15 minutes after the start of emotional stimulation showed no return to normal in 45% of the asthenics, 6% of the pyknics, and 3.5% of the athletics. This is taken as support for the author's theory that the tonus regulations of the striated muscular system, the autonomic nervous system, and affective reactivity are closely interrelated. Tension differences in the inner tonus, which is conceived as a balance between the sympathetic and parasympathetic systems, are equally important determinants of the basic personality types as the main variations in physique and psychomotor development. They were found to be associated with the cyclic, explosive, and retentive forms of emotionality and to be responsible for

the constitutional inequalities in fatigue and occupational aptitude, the individual capacity for relaxation, and the metabolic economy of the organism.—*F. J. Kallmann* (New York State Psychiatric Institute).

3989. Montagu, M. F. A. On the physiology and psychology of swearing. *Psychiatry*, 1942, 5, 189-201.—The author presents an extensive discussion of swearing as a reaction to frustration. It serves to relieve the tension caused by aggressive feelings and to restore psychophysical equilibrium. In its functioning it is psychologically and physiologically comparable to laughing and weeping in serving to dissipate energy requiring appropriate expression for the equilibrium of personality. Social taboos have limited this form of expression for women, causing a substitution of infantile weeping, but with increasing social emancipation, woman is renouncing swooning and weeping in favor of swearing. 26-item footnote bibliography.—*M. H. Erickson* (Eloise Hospital).

3990. Moore, M., Trowbridge, L. S., & Gray, M. G. General observations on the effects of sodium bromide under experimental conditions. *Dis. nerv. Syst.*, 1942, 3, 220-224.—Some general observations were made in the course of psychologic experiments on subjects who were receiving sodium bromide. These are discussed under the following headings: sedative effect, effect on occupational performance, effect on libido, effect on appetite, tendency to habit formation, effect on the skin, effect on mood and disposition and blood bromide concentrations. Some of the observations made did not agree in all respects with the literature on the effects of this drug. There is need for a more systematic study of both the psychologic and general effects of sodium bromide.—*C. E. Henry* (Western Reserve).

3991. Morgan, M. I., & Ojemann, R. H. A study of the Luria method. *J. appl. Psychol.*, 1942, 26, 168-179.—The question of whether or not the Luria test could be used to detect tendencies to inhibit and avoid under conditions of mild affective reactions was investigated in this study. 35 men and women, aged 18-25, were used. Data from an attitude test, self-report, personal interviews, and observations of the subjects' reactions in a group meeting situation were used to classify the subjects into low, intermediate, and high conflict groups. The Luria test records for these 3 groups indicate that the manual responses differentiate the 3 conflict groups at a high level of confidence. The verbal responses show a higher proportion of personalized responses and a lower proportion of logical responses for the high conflict as compared to the low conflict group.—*W. F. Madden* (Middlebury).

3992. Richter, C. P., & Woodruff, B. G. Facial patterns of electrical skin resistance; their relation to sleep, external temperature, hair distribution, sensory dermatomes and skin disease. *Johns Hopkins Hosp. Bull.*, 1942, 70, 442-459.—The skin on the faces of 42 adults and 6 babies showed a sharply

demarcated area of low resistance, constant for each individual, which included eyelids, nose, mouth, parts of the forehead, cheeks, and skin under the lower lip, and in bald-headed men, the bald area. During sleep the area was limited to the mouth. In warm temperatures it expanded to include, in some cases, the entire head. In cold temperatures, it contracted to concentric zones around the mouth. The mechanism of the phenomenon is unknown. The authors could not demonstrate connection with sweating. The outline closely resembles the hairless area on monkeys' faces. The suggestion is made, based on findings in syringomyelia, that the pattern may have some connection with the descending spinal nucleus of V. Furthermore, the low electrical resistance of the area indicates high metabolic activity, which accords with the fact that the head end of all organisms shows the most active metabolism. This area combining low electrical resistance and high metabolism, shows the greatest incidence of skin cancer.—*M. E. Morse* (Baltimore, Md.).

3993. Rubinstein, H. S. The relation of the reflex response to total behavior. *Dis. nerv. Syst.*, 1942, 3, 170-172.—The concept of the reflex is reviewed, defined, and then applied to psychobiologic phenomena. The structural and mechanical background on which the reflex is superimposed is qualitatively similar for all types of behavior. Consciousness thus becomes an end product of the highest neural integration within the organism, just as the fixed, but complex, structure of a vacuum tube, for example, may give rise to invisible rays when properly charged.—*C. E. Henry* (Western Reserve).

3994. Simonson, E., Baer, A., & Enzer, N. The influence of vitamin B (complex) surplus on the capacity for muscular and mental work. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 81.—Abstract.

3995. Snodgrass, J. M. Simple electric integration of action potentials as a direct index of muscular activity. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 82.—Abstract.

3996. Thorndike, E. L. Human instincts and doctrines about them. *Brit. J. educ. Psychol.*, 1942, 12, 85-87.—It is convenient to call that share of behavior which is attributable to the genes by the name instinct. Indirect evidence of the contributions of the genes to human behavior is found in scores of instances. Burt's aim to evaluate group factors in impulse and conduct by a study of inter-correlations, and to isolate genetic determinants is commendable, since the un-learned connections of original nature are not unorganized. There is involved tremendous difficulty in such a task, and the use of simpler experiments in the study of the gene causation of human behavior should not be overlooked.—*R. C. Strassburger* (St. Joseph's College for Women).

3997. Toman, J. E. P., & Oster, R. H. The human electromyogram in brief volitional twitches.

*Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 86.—Abstract.

[See also abstracts 3876, 3880, 3884, 3886, 3888, 3894, 3908, 3939, 3941, 3948, 3964, 4032, 4033, 4039, 4043, 4049, 4050, 4139, 4152.]

### PSYCHOANALYSIS, DREAMS, HYPNOSIS

3998. Bellak, L. A note about the Adamsapple. *Psychoanal. Rev.*, 1942, 29, 300-302.—In folklore the Adam's apple is a piece of the forbidden fruit which stuck in Adam's throat. According to analysts the primal sin of mankind is coitus so that the latent meaning of the eating of the forbidden fruit is the act of intercourse. In the story the true meaning of the situation is kept hidden by having Eve be the active seducer and by having Adam become pregnant; that is, Adam gets a piece of fruit stuck in his throat so as to form a protrusion. The Adam's apple may also symbolize the phallus. That the male is given such an innocent rôle in the fall may be due to the fact that the writers of the Bible were men.—*L. B. Heathers* (Smith).

3999. Christensen, E. O. Basic determinants in the art of Andrea del Sarto: a reinterpretation. *Psychoanal. Rev.*, 1942, 29, 253-269.—The author criticizes Ernest Jones' analysis of Andrea del Sarto because that analysis was based mainly on the opinions of one of Andrea's contemporaries, Vasari. He then reinterprets the artist by examining one objective characteristic of his artistic style, the over-abundance of drapery on his figures, on the assumption that an artist's unconscious impulses affect his productions. Andrea was the son of a tailor. In the opinion of analysts sons of tailors are likely to have unusually strong castration fears. From the dreams of analytic patients, it appears that clothing often serves as a phallic symbol. The over-abundant use of draperies suggests a strong negating of unconscious homosexual tendencies which resulted from unresolved unconscious infantile castration fears.—*L. B. Heathers* (Smith).

4000. Cutting, J. A. Hallucinations; their mechanism and significance. *Calif. West. Med.*, 1942, 56, 342-344.

4001. Devereux, G. Social structure and the economy of affective bonds. *Psychoanal. Rev.*, 1942, 29, 303-314.—The author proposes that it is impossible to shift the libido directly from one object to another object without going through a transition period during which the libido is invested in one's self. He is mainly interested in the difficulties in making such shifts which are due to cultural factors or to the individual's status relations. All shifts in libido involve shifts in status relations which are frequently accompanied by the expectation that the status will be lowered. There is less personal upheaval when shifts must be made within a society of the consanguine *Gemeinschaft* type where the family unit is broad, than in the conjugal *Gesellschaft* type where the biological family is the unit. The problems of old age are similar to those involved in making libido shifts.—*L. B. Heathers* (Smith).

4002. Ehrenwald, H. Telepathy in dreams. *Brit. J. med. Psychol.*, 1942, 19, 313-323.—Two cases are presented. In one a patient dreams of a treatment to be given her by the author, localizing in the dream an abdominal rash which actually appeared as a result of the treatment given her the day following the dream. In the second, a woman reports dreaming of the death of an artist's wife; the death was confirmed the next day. The author believes it important to understand both the psychoanalytic and telepathic aspects of the dreams.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

4003. Flugel, J. C. Sublimation: its nature and conditions. Part II. *Brit. J. educ. Psychol.*, 1942, 12, 97-107.—Sublimation is considered as a consequence of incomplete repression, where the new forms of instinctive expression are approved and regarded as of value. The occurrence of sublimation rather than neurotic symptoms depends upon a quantitative factor, the degree of repression relative to the strength of the instinct, and a qualitative factor, the discovery of a compromise satisfactory to instinct and repressing forces. There is often involved the active interplay of forces, with 2 or more tendencies contributing positively to the result, as McDougal has observed in his discussion of sentiment formation. The two most precise formulations of the concept of sublimation, that of the psychoanalysts and that of McDougall, give rise to difficulties, but there is little prospect of any new definition offering much improvement. Sublimation should still be regarded as a rather vague notion, a useful subdivision of the broader process of displacement, in which inhibition, overdetermination, and harmony resulting from moral approval play the characteristic roles.—*R. C. Strassburger* (St. Joseph's College for Women).

4004. Glick, H. N. Hypnotic negativism. *Psychiatry*, 1942, 5, 177-178.—The author recounts an instance in which an unwilling subject was given suggestions that she relax by a person whom she disliked. There resulted a state of rigidity and tension which was considered to be negativistic and possibly hypnotic.—*M. H. Erickson* (Eloise Hospital).

4005. Harriman, P. L. Hypnotic induction of color vision anomalies: I. The use of the Ishihara and the Jensen tests to verify the acceptance of suggested color blindness. *J. gen. Psychol.*, 1942, 26, 289-298.—When Erickson's procedure (see XIII: 3643) was used, color vision anomalies were induced by hypnotic methods. The results, in general, confirm Erickson's findings. Some variations were found from natural color blindness however, and Grether's emphasis (see XV: 87) on the relation between the results and the nature of the instructions seems justified.—*C. N. Cofer* (George Washington).

4006. Harriman, P. L. The experimental induction of a multiple personality. *Psychiatry*, 1942, 5, 179-186.—Discussing the problem constituted by automatisms in normal persons and their importance in relation to the phenomena of multiple personality,

the author outlines techniques for their experimental hypnotic investigation, cites typical results obtained, and offers a preliminary report upon the spontaneous appearance of a "secondary personality." Stress is placed upon the need to avoid any suggestion leading to the playing of a role and the important need to refrain from making unwarranted interpretations of behavior elicited.—*M. H. Erickson* (Eloise Hospital).

**4007. Macquisten, A. S., & Pickford, R. W.** Psychological aspects of the fantasy of Snow White and the Seven Dwarfs. *Psychoanal. Rev.*, 1942, 29, 233-252.—The story of Snow White is given one of its many possible analytic interpretations. The interpretation is based primarily on the child's fantasy reactions to her frustrations within the family, but it also allows for the fantasies of the mother; the unconscious attitudes of both mother and child are allowed expression in disguised form. Since this is a story of a mother and a daughter, most of the conflict centers around the sexual rivalry of these two for the father. The folk tale is "a form of socialized escape from the frustrations of unconscious anxiety and guilt."—*L. B. Heathers* (Smith).

**4008. Sarbin, T. R., & Madow, L. W.** Predicting the depth of hypnosis by means of the Rorschach test. *Amer. J. Orthopsychiat.*, 1942, 12, 268-271.—16 subjects with high, and 8 with low hypnotic indices were compared on the Rorschach test. The only item which successfully differentiated the 2 groups was the *W/D* ratio. The hypnotizable subjects gave more whole responses; they seemed to be more abstract-minded, generalizing people.—*R. E. Perl* (Jewish Board of Guardians).

**4009. Shyne, A. W.** The contribution of Alfred Adler to the development of dynamic psychology. *Amer. J. Orthopsychiat.*, 1942, 12, 352-361.—This paper attempts to draw together from the writings of Alfred Adler the main tenets of Individual Psychology in order to bring into focus certain positive contributions which seem to have a real place in the total configuration of dynamic psychology. There is a discussion of organ inferiority, the fictive goal, parental attitudes, birth order, the masculine protest, the neurotic character, the rôle of the therapist, etc. Adler rejects the concept of the libido as the motivating force in the neurosis and substitutes the theory of the inferiority feeling with the concomitant striving for power and the equilibrating factor of social feeling, as the principal dynamics in personality organization. Treatment is directed toward showing the patient the genesis of his feeling of inferiority and the fallacy of seeking absolute superiority, and toward helping him to reorient his goal in a more social direction.—*R. E. Perl* (Jewish Board of Guardians).

**4010. Weygandt, W.** Der Okkultismus, seine Grundlagen und Gefahren. (Occultism, its foundations and dangers.) *Z. ges. Neurol. Psychiat.*, 1939, 166, 453-496.

[See also abstracts 4027, 4088, 4089, 4110.]

## FUNCTIONAL DISORDERS

**4011. Abse, D. W.** Rationale of convulsive therapy. *Brit. J. med. Psychol.*, 1942, 19, 262-270.—The position is supported that convulsive treatment solves immediate conflicts through repression. 3 cases are described briefly. During treatment the patient becomes more accessible, and a favorable transference situation is created; but analytic procedures are to be used with caution, because they are to some extent incompatible with the shock treatment.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

**4012. Amster, F.** Therapeutic economy. *Amer. J. Orthopsychiat.*, 1942, 12, 301-309.—The case histories of three 15-year old girls each of whom presented her problem as "self-consciousness" are discussed to illustrate the utilization of differential diagnosis in differential treatment. It is emphasized that a symptom has a peculiar meaning to a particular personality and that individualized therapeutic orientation to a client presents definite values in therapeutic understanding, direction, and results. Individualized diagnosis leads to therapeutic economy for client, therapist, and agency.—*R. E. Perl* (Jewish Board of Guardians).

**4013. Balint, M.** Contributions to reality testing. *I. Brit. J. med. Psychol.*, 1942, 19, 201-214.—A woman of 45, under treatment for 3 years, had schizophrenic hallucinations. These were to some extent controlled through teaching her to test their reality. There are four steps to reality testing: (1) to decide whether sensations are coming from within or from without, (2) to infer what is causing them, (3) interpretation or finding the meaning, and (4) to find the correct reaction to the perceived sensations.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

**4014. Barker, L. F.** Psychotherapy—a modern medical science. *Amer. Scholar*, 1942, 11, 201-207.

**4015. Bennett, G.** Structural factors related to the substitute value of activities in normal and schizophrenic persons: II. An experimental investigation of central areas of the personality. *Character & Pers.*, 1942, 10, 227-245.—The technique for the study of the problem was discussed in the first installment of the series (see XVI: 992). The substitute value of an activity is indicated by the decrease in resumption of another activity which has been interrupted by it. It is concluded from this study that: "1. Central tasks can instigate in schizophrenics tensions comparable to those of normals for neutral tasks. 2. Tasks which are dissimilar can serve as substitutes in normal persons if central material is involved, but for schizophrenics, substitute discharge of one system by another is relatively weak or infrequent."—*M. O. Wilson* (Oklahoma).

**4016. Berg, C.** Clinical notes on the analysis of a war neurosis. *Brit. J. med. Psychol.*, 1942, 19, 155-185.—A war neurosis merely precipitates the latent state of psychoneurosis or psychosis in an individual already potentially ill. The analysis of a war neurosis should therefore be undertaken only

by one prepared and competent to unearth the predisposing nucleus. The case is presented of an army officer in his early forties, who could not face the prospect of overseas service. Repression of traumatic war experiences was accompanied by repression of other psychic elements, including sexuality and aggression. Once this repression was broken through, material from earlier life became accessible. The case is interpreted in terms of unconscious homosexuality, with its sublimated equivalents. Following the course of treatment the patient was able to rejoin the fighting forces.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

4017. Brody, M. B. A survey of the results of intelligence tests in psychosis. *Brit. J. med. Psychol.*, 1942, 19, 215-257.—Because deterioration in psychosis must be corrected for ordinary score decreases with age, the results of intelligence tests among those of mature years are first reviewed, followed by the results among psychotics. The typical pattern among psychotics is: vocabulary, highest; verbal test ability, second; non-verbal test ability, lowest. The qualitative aspects of mental test performance are reviewed. 230 references.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

4018. Brunnschweiler, H. Enseignement sur le syndrome sensitif cortical tiré de l'étude de blessures cérébrales de guerre. (Conclusions on the cortical sensory syndrome drawn from the study of cerebral war wounds.) *Schweiz. Arch. Neurol. Psychiat.*, 1941, 48, 165-172.—Brunnschweiler reviews, in the light of present knowledge, his unpublished cases of parietal injuries received in World War I. Factors which at first sight do not appear to be sensory may predominate in the elaboration of sensibility. Certain parietal disorders are neither strictly psychic nor neurological but are due to modifications of sensibility or variations of its threshold. In disturbances of superior associative sensibilities (stereognosis, sense of direction in cutaneous sensibility) the true expression of the pathological process is not the deficiency of primary sensations, but the new constructive functions which utilize unaccustomed paths to adapt to the conditions created by the lesion. Other topics discussed are the provocation of paraesthesiae by disturbances of protopathic and vibratory sensations, and the psychogalvanic reflex in cases of cortical sensory lesions, which shows dissociation of the affective reaction from conscious perception.—*M. E. Morse* (Baltimore, Md.).

4019. Dayton, N. A., Moore, M., Kunberger, D. A., & Gray, M. G. Alcoholism and mental disorder in Massachusetts, 1917-1933. *Quart. J. Stud. Alcohol*, 1942, 3, 50-64.—Aspects of age, marital status, education, environment, economic condition, and place of birth are discussed in the records of 56,579 first admissions to mental hospitals.—*W. L. Wilkins* (U. S. Marine Corps Base, San Diego, Calif.).

4020. Dworkin, S., Baxt, J. O., & Gross, J. Deafness "neurosis" in the cat as a special form of

disinhibition. *Fed. Proc. Amer. Soc. exp. Biol.*, 1942, 1, No. 1, Part II, 23.—Abstract.

4021. Eleasberg, W. Remarks on the psychopathology of pornography. *J. crim. Psychopath.*, 1942, 3, 715-720.—The greater part of pornographic literature never appears in print but remains in the form of manuscripts or correspondence. A striking feature of this literature is that one cannot tell whether a man or woman is either the inventor or consumer. Most of the individuals indulging in pornography are suffering from disorders in heterosexual contacts: usually frigidity in the woman and individualizing impotence in the male. Analytic treatment is recommended for most of the cases.—*A. Chapani* (Yale).

4022. Eysenck, H. J. Abnormal preference judgments as 'complex' indicators. *Amer. J. Orthopsychiat.*, 1942, 12, 338-346.—Unusual or abnormal preference judgments are often caused by complexes or emotional difficulties which inhibit the normal response. This article suggests the principles on which a preference test might be built which might serve as a rough and ready criterion for indicating those persons who might be most in need of individual study.—*R. E. Perl* (Jewish Board of Guardians).

4023. Freeman, W., & Watts, J. W. *Psychosurgery*. Springfield, Ill.: Charles C. Thomas, 1942. Pp. 337. \$6.00.—This book discusses the surgical treatment of mental disorders, particularly the recently developed operation for interruption of the frontal association pathways known as prefrontal lobotomy. Part I is an historical introduction, with special emphasis upon the work of Egas Moniz who introduced the method of prefrontal lobotomy. Part II discusses the frontal lobes from the following points of view: significance of functional-anatomical relationships, autonomic functions, tumors, atrophies, softenings, injuries, and the results of frontal lobectomy in animals and man. Part III gives a detailed description of the method of prefrontal lobotomy developed by the authors at George Washington University Hospital. The following are discussed: operative technique, critical plane of section, postoperative condition, personal and social behavior following operation, observations under local anesthesia during operation, and patient's post-operative consciousness of self. Chapters 14 and 15 by Thelma Hunt describe psychometric and personality profile results. EEG findings are also described. Part IV describes the results of prefrontal lobotomies on: affective reaction types, schizophrenic reaction types, obsessive tension states, and other neuroses. Part V is devoted to a discussion of psychopathology in relation to frontal lobotomy.—*D. B. Lindsley* (Brown).

4024. Friedline, C. L., & Berman, A. B. Psychological aspects of recovery from cerebral hemorrhage. *J. gen. Psychol.*, 1942, 26, 359-363.—From the patient's account and from direct observation of her during the recovery period, various aspects of the recovery, particularly those involving verbal reac-

tions, are described.—C. N. Cofer (George Washington).

4025. Gagnon, S. "Is reading therapy?" *Dis. nerv. Syst.*, 1942, 3, 206-212.—"The reading habits of mental patients are analyzed. Comparisons are made between these habits of patients and those of the general public. Books of fiction are borrowed more frequently by patients than by patrons of public libraries. No interpretation of the reading habits of patients is attempted at this time. . . . Some observations are made regarding the therapeutic effects of reading on the mental patient."—C. E. Henry (Western Reserve).

4026. Glueck, B. A critique of present-day methods of treatment of alcoholism. *Quart. J. Stud. Alcohol*, 1942, 3, 79-91.—Minimal conditions for an adequate therapy for the problem drinker are a recognition of a need for help, a desire to get well, some transference, enough time to carry through to a cure.—W. L. Wilkins (U. S. Marine Corps Base, San Diego, Calif.).

4027. Goitein, P. L. Mind of murder. *J. crim. Psychopath.*, 1942, 3, 625-647.—The author presents a psychoanalytic interpretation of the case of a 28-year old girl who exhibited advancing feelings of self-destruction "arising by way of compensation for certain homicidal impulses directed toward members of her immediate family." The contents of 150 of the patient's dreams are graphed to show the oscillation of libido, and the trends of phantasy and themal content occurring during the analysis.—A. Chapanis (Yale).

4028. Haffter, C. Der infantile Mensch im Militärdienst. (The infantile man in military service.) *Schweiz. Arch. Neurol. Psychiat.*, 1941, 48, 196-231.—To the infantile psychopath military service is a substitute, only too acceptable, for family authority and protection. It appeals to his fantasies, still in the Wild West stage, and the uniform lends prestige. These compensations, however, are external and leave no imprint on his personality. The neurotic often makes a good soldier although his symptoms in civil life may be severe. He identifies himself with other followers of a common leader. Regulated behavior, covering every eventuality, is drilled into him, thus producing automatic assurance, and his strivings for power are satisfied by an assured position, unassailable although limited authority, and a duty for which he is prepared. Psychopaths and neurotics cannot fulfil extreme demands. Psychopathic compensatory aspirations must be met with great caution, but neurotic superstructures may be curative and adaptable to military ends. Military service involves a break in continuity, depersonalization, inner transformation, reawakening of personality, and advance to adulthood in the service of an accepted superpersonal ideal. The analogies to primitive pubertal rites, mystic experience, and entrance into the religious vocation are stressed.—M. E. Morse (Baltimore, Md.).

4029. Hamilton, J. R. Epileptiform convulsions in rats. I. Description of the phenomena and a comparison with symptomatology of human epilepsy. *J. comp. Psychol.*, 1942, 33, 297-303.—"Rats showing epileptiform convulsions have been observed in the stock animals of the psychology department at the University of California for over ten years. Three years ago experiments were undertaken to determine more fully the characteristics of these attacks. Although breeding proved difficult, thirty-nine animals which showed abnormal symptoms of a convulsive nature were obtained from parents who were subject to seizures. A description is presented of the symptoms and course of the attacks. . . . The similarities and differences between the phenomena observed in the rats and epilepsy as found in humans are described."—K. F. Muenzinger (Colorado).

4030. Herskovitz, H. H., & Plesset, M. R. Psychosis in adult mental defectives. *Psychiat. Quart.*, 1941, 15, 574-588.—Case material of adult mental defectives with symptomatic psychotic behavior is cited. Psychosis in individuals of defective intelligence should be classified just like psychosis in persons of normal intelligence is classified. Functional psychoses do not usually occur in individuals with an IQ of less than 50.—A. Weider (N. Y. U. Medical College).

4031. Hinckley, R. G., & Fenlason, A. F. Mental hygiene interviewing: a therapeutic approach. *Amer. J. Orthopsychiat.*, 1942, 12, 309-317.—Concern with the emotional problems of college students led to this discussion of the treatment value of the interview in a college mental hygiene clinic. Several rules of procedure have been formulated.—R. E. Perl (Jewish Board of Guardians).

4032. Humphrey, G. Experiments on the physiological mechanism of noise-induced seizures in the albino rat. I. The action of parasympathetic drugs. *J. comp. Psychol.*, 1942, 33, 315-323.—The general purpose of this series of studies is to throw light on the physiological processes underlying noise-induced seizures in rats. The particular purpose of this study was to find out whether atropin, a parasympathetic depressant, and eserine, a parasympathetic excitant, might affect the frequency of the seizures. It was found that this frequency was lowered by atropin and raised by eserine. However, it was not possible to demonstrate any antagonism between these two drugs used in combination.—K. F. Muenzinger (Colorado).

4033. Humphrey, G. Experiments on the physiological mechanism of noise-induced seizures in the albino rat. II. The site of action of the parasympathetic drugs. *J. comp. Psychol.*, 1942, 33, 325-342.—If the opposite effects of atropine and eserine (see XVI: 4032) are identical with their parasympathetic opposition, "the use of drugs known to have the same end effect as they have on the parasympathetic effectors should have the same effect on seizures." Neither benzyl benzoate, which relaxes all smooth muscle autonomic effectors, nor pituitrin, which contracts the walls of the intestine, had any

effect on the frequency of seizures. Mecholyl likewise had no effect, while nicotine increased seizures. "There is no evidence, from the pharmacological experiments conducted, that the parasympathetic effectors are involved in the effect of the parasympathetic drugs, eserine and atropin."—K. F. Muenzinger (Colorado).

4034. Kahn, S. The neuropsychiatrist in Army examinations. *Med. Rec., N. Y.*, 1942, 155, 371-373.—Brief review is given of the neuropsychiatrist's function in examining selectees for the Army, of the causes for rejection, and of the problems involved in interpreting deviations from the normal.—M. H. Erickson (Eloise Hospital).

4035. Kant, O. The relation of a group of highly-improved schizophrenic patients to one group of completely-recovered and another group of deteriorated patients. *Psychiat. Quart.*, 1941, 15, 779-789.—"Twenty-two schizophrenic patients who had received no shock treatment, the majority of whom had been out of the hospital for more than five years, were at the time of personal re-examination found to be 'highly improved.' The results of this investigation were compared with those of studies of a group of completely recovered and a comparable group of deteriorated schizophrenic patients." The general characteristics of the highly improved group proved to be intermediate between those of the two extreme groups, but much closer to the recovered group; no true catatonic pictures were present in the highly improved group. Confirming evidence is offered to other studies which indicate that the presence of manic-depressive features in a schizophrenic picture usually indicates at least a fair prognosis.—A. Weider (N. Y. U. Medical College).

4036. Lang, T. Untersuchungen an männlichen Homosexuellen und deren Sippschaften mit besonderer Berücksichtigung der Frage des Zusammenhangs zwischen Homosexualität und Psychose. (Studies on male homosexuals and their kinships regarding the relationship between homosexuality and psychosis.) *Z. ges. Neurol. Psychiat.*, 1941, 171, 651-679.—Of the 33 male homosexuals used as index cases in this survey, only 13 were classified as mentally normal, while a diagnosis of schizophrenia (5), schizoid personality (2), and manic-depressive psychosis (1) was made in 8 of the 20 mentally abnormal index cases. No psychotic cases were found in 58 parents, 13 children, and 18 half-siblings of the index cases; but there were 5 definitely schizophrenic and 2 possibly schizophrenic cases among the 120 full siblings, yielding a corrected schizophrenia rate of 5.7-7.1%. This increase in the sibship group is accepted by the author as evidence for the conclusion that homosexuality and schizophrenia are closely interrelated.—F. J. Kallmann (New York State Psychiatric Institute).

4037. Lemere, F., Voegtl, W. L., Broz, W. R., & O'Halloran, P. Conditioned reflex treatment of chronic alcoholism. V. Type of patient suitable for this treatment. *Northw. Med., Seattle*, 1942, 41,

88-89.—[Abstracted review; original not seen.] 830 of 1,042 addicts treated were followed up and 58.7% found to be still abstinent. Certain types seem to be unpromising material for this treatment: the financially indigent; the uncooperative; the constitutional psychopaths; the inadequate, the immature, and the easily led; the deteriorated; the psychotic; women; professional men, especially doctors, business executives, bankers, artists, and musicians.—W. L. Wilkins (U. S. Marine Corps Base, San Diego, Calif.).

4038. Levine, M. Psychotherapy in medical practice. New York: Macmillan, 1942. Pp. 320. \$3.50.—This book of 13 chapters was written for general practitioners and medical specialists other than psychiatrists, who first see the early cases of psychiatric disorder, so that they may have a better understanding of what may be done for such patients. The first chapter lists and discusses 24 common misconceptions, such as the role in mental disorder of heredity, masturbation, antenatal influences, overwork, and mistaken ideas of the therapeutic effects of marriage and punishment. The second chapter lists methods of psychotherapy and the common mistakes made. Methods of psychotherapy for the general practitioner are then discussed. Other representative chapter headings are: suicide risks, sex and marriage, basic attitudes toward children, the problems of parents and children, normality and maturity. The book closes with a chapter on suggested reading, listing and discussing those books offering general and specific information for the practitioner.—M. H. Erickson (Eloise Hospital).

4039. Lindsley, D. B., Finger, F. W., & Henry, C. E. Some physiological aspects of audiogenic seizures in rats. *J. Neurophysiol.*, 1942, 5, 185-198.—Physiological changes (heart rate and brain waves) and the susceptibility of rats to seizures induced by high-pitched auditory stimulation were studied under the following conditions: (1) while unrestrained, (2) while restrained, either physically or physiologically by means of curarization, (3) after bilateral section of the vagus nerves. Although seizures occurred in approximately half of the rats selected for susceptibility when unrestrained, no attacks were induced in restrained, curarized, or vagotomized animals. During an audiogenic attack there were abnormalities of the EEG similar to those observed in humans during convulsive seizures; during non-seizure stimulation trials no such EEG changes were observed. Marked heart rate changes were associated with seizure episodes. Following the onset of stimulation but prior to an attack marked increases and/or decreases in heart rate occurred; these were interpreted as evidence of an autonomic component of the seizures involving both sympathetic and parasympathetic activity, but with the former tending to predominate. Heart rate changes did not occur in the absence of seizures unless there was some form of "substitute behavior." The results are discussed in terms of the underlying

physiological conditions for an attack and in relation to their temporal sequence.—*D. B. Lindsley* (Brown).

4040. Mauchs, S. B. A concept of psychopathy and psychopathic personality: a dynamic interpretation of ten 'so-called' psychopaths. *J. crim. Psychopath.*, 1942, 3, 494-516; 664-714.—In a previous article (see XV: 4237) the author discussed the history and present status of the concept of psychopathy. In this article "ten cases are fully presented and discussed with emphasis on the delimitation of the true psychopath from other groups resembling him."—*A. Chapinis* (Yale).

4041. Mayers, A. N., & Mayers, E. B. Dynamic-concept test; quantitative modified play technique for adults. *Psychiat. Quart.*, 1941, 15, 621-634.—A standardized play technique devised for adults has been used on 33 schizophrenics and a group of control subjects. The method requires the subject to compose spontaneous stories in response to 5 titles chosen for their psychosexual and conflict content. Results are offered which seem to lend experimental proof to the theory that "schizophrenics in telling a story will tend to function best in a purely narcissistic environment and that the capacity to function decreases as the more mature levels of psychosexual development are reached."—*A. Weider* (N. Y. U. Medical College).

4042. Meltzer, H. Mental hygiene and learning. *J. appl. Psychol.*, 1942, 26, 268-284.—This is a summary of several case studies that illustrate the author's point of view concerning the place of mental hygiene in the learning process. There is little in the field of academic psychology that can contribute to the learning processes concerned with human relationships when such relationships depend upon the development and persistence of communication techniques. The learning attitude that makes for mental health is an attitude that enables the development of techniques of communication both to himself and to others. Conversely, the learning attitude that leads to emotional sickness is characterized by the fact that the individual becomes less acceptable to himself and hence less understandable to himself and others.—*W. F. Madden* (Middlebury).

4043. Moore, M. T. An evaluation of vitamin B therapy in neurological and psychiatric conditions. *Med. Rec., N. Y.*, 1942, 155, 305-310; 329-331.—Vitamin B complex is now known to contain at least 14 components, and extensive but not well established claims are made for their therapeutic efficacy. The author discusses the clinical use of vitamin B and its various components in relation to peripheral neuropathies, central neuronopathies, and neurasthenia-like syndromes. He concludes that specific deficiencies for various components do not exist and that more exact clinical work combined with earlier diagnoses is essential to an understanding of this form of therapy. 124-item bibliography.—*M. H. Erickson* (Eloise Hospital).

4044. Moros, N. The alcoholic personality; a statistical study. *Quart. J. Stud. Alcohol*, 1942, 3,

45-49.—At the Veterans' Administration Facility, Northport, for 748 World War veterans who were of draft age in 1917-1918, percentages of alcoholics according to Irish, American, Italian, and Jewish origin were computed. Chronic alcoholism was found to be prevalent in the first two groups and rare in the latter.—*W. L. Wilkins* (U. S. Marine Corps Base, San Diego, Calif.).

4045. Penfield, W., & Erickson, T. C. Epilepsy and cerebral localization. Springfield, Ill.: Charles C. Thomas, 1941. Pp. 623. \$8.00.—After a brief historical résumé, definitions and classifications of epilepsy are considered. The concept of epilepsy as an entity is false, and the term is a misnomer since there are multiple known (symptomatic epilepsy) and unknown (cryptogenic epilepsy) causes. In terms of mechanism an epileptic seizure is defined as "a state produced by an abnormal excessive neuronal discharge within the central nervous system." The seizure may originate in any part of the brain and may or may not spread to other areas. The book is organized around 10 years of experience at the Montreal Neurological Institute. The broader aspects of "the epilepsies," including methods of examination, diagnosis, treatment and prevention, are considered from practical and theoretical standpoints. In the course of treatment by craniotomy involving neurosurgical exploration and removal of cerebral tissue a wealth of information has been gained through physiological, psychological, and patho-histo-anatomical studies. Of particular interest to the psychologist, in addition to what may be learned concerning cerebral functions from a consideration of the physiological mechanisms of epilepsy, are chapters on EEG (by H. H. Jasper) and on the intelligence and personality of epileptics (by M. R. Harrower-Erickson).—*D. B. Lindsley* (Brown).

4046. Pickford, R. W. A restricted paramnesia of complex origin. *Brit. J. med. Psychol.*, 1942, 19, 186-191.—The paramnesia consisted in the failure of recognition of a red-haired girl through the arousal of a restricted phantasy in which the girl was identified with a former fiancée via a familiar neighbor's daughter, who was her friend and in whose house she lived. To understand particular instances of paramnesia, it is essential to follow out the complex lines of emotional interest within the context of the experience.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

4047. Pickford, R. W. Rossetti's 'Sudden Light' as an experience of *déjà vu*. *Brit. J. med. Psychol.*, 1942, 19, 192-200.—A poem by D. G. Rossetti (1854) describes an experience closely allied to *déjà vu*. The qualities include kinaesthetic, visual, olfactory, and auditory experiences. The interpretation is suggested that the combination of experiences which took place in the *déjà vu* was a union of unconsciously persistent, but childish and infantile love of the poet for his mother with adult love for his mistress.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

**4048. Praeger, N.** Die Rolle des Isolierungsvorgangs bei der Zwangsnurose. (The role of the phenomenon of isolation in compulsion-neurosis.) *Z. ges. Neurol. Psychiat.*, 1939, 166, 251-254.—The author accepts the Freudian theory that obsessions are disguised manifestations of antisocial tendencies, but doubts, on the basis of his clinical observations, that obsessional individuals always manage to isolate their compulsory phenomena from their deeper affective associations. Rather, the conversion of many antisocial impulses into obsessions takes place, especially in the beginning, in a conscious and undisguised form, or at least a definite presentiment of the deeper connections is present. In these latter cases isolation prevents the loss of self-respect and restrains the urge to effectuate the antisocial impulses.—*F. J. Kallmann* (New York State Psychiatric Institute).

**4049. Reese, H. H., Lewis, N. D. C., & Sevinghaus, E. L.** The 1940 year book of neurology, psychiatry and endocrinology. Chicago: Year Book Publishers, 1941. Pp. 856. \$3.00.—A special preface summarizes the editorial history of the Year Book for this 40th anniversary edition. Additionally, each section is headed by a special article: for neurology, the history of scalping and its clinical aspects, by Reese; for psychiatry, the pluralistic approach to psychiatric research, by Lewis; and for endocrinology, endocrine disorders of the female reproductive system, by Sevinghaus. Summaries are given of the year's significant articles, and more than 800 authors are cited. There is an increasing emphasis upon clinical and experimental procedures. Subject and author indices and footnote bibliographies.—*M. H. Erickson* (Eloise Hospital).

**4050. Reese, H. H., Lewis, N. D. C., & Sevinghaus, E. L.** The 1941 year book of neurology, psychiatry and endocrinology. Chicago: Year Book Publishers, 1942. Pp. 768. \$3.00.—In this issue the authors comment upon the scantiness of foreign literature, although 25% of the material cited comes from foreign sources, and upon the effect of the war effort in limiting special contributions and research developments. For both neurology and psychiatry the editors list a number of the outstanding books published during the year. Otherwise the plan of the book follows that of previous issues in summarizing current literature, citing from the works of over 800 authors, except that special emphasis is placed upon therapeutic procedures, diagnostic measures, and the problems of geriatrics. Subject and author indices and footnote bibliographies.—*M. H. Erickson* (Eloise Hospital).

**4051. Romm, M. E.** Compulsion factors in exhibitionism. *J. crim. Psychopath.*, 1942, 3, 585-596.—The author presents the case history of a man suffering from compulsive exhibitionistic tendencies. A psychoanalytic interpretation is offered.—*A. Chapanis* (Yale).

**4052. Schroeder, C. W.** Mental disorders in cities. *Amer. J. Sociol.*, 1942, 48, 40-47.—Within

the limits of comparability, studies made in 5 cities (Kansas City, Milwaukee, Omaha, St. Louis, and Peoria) show the same tendency of cases of mental disorder, as measured by commitments, to concentrate in interstitial areas. When mental disorders are separated into their subdivisions, the same general conclusions as those reached by Faris and Dunham in their study of Chicago may be drawn, though in this study these conclusions are not so clear as in the concentration of the total number of commitments.—*D. L. Glick* (Brown).

**4053. Schulz, B.** Kinder von Elternpaaren mit einem schizophrenen und einem affektivpsychotischen Partner. (Children of marriages between one schizophrenic and one manic-depressive partner.) *Z. ges. Neurol. Psychiat.*, 1940, 170, 441-514.—The results of this study of 30 sibships, tainted by a schizophrenic psychosis in one parent and by some form of affective psychosis in the other, fail to support the author's working hypothesis that close genetic interrelations may exist between the two psychoses. In 20 of the sibships whose one parent was definitely schizophrenic while the other parent developed a more or less typical manic-depressive psychosis with or without schizoid features before the beginning of the involutional period, the frequency of schizophrenia was 8.4%, and that of manic-depressive psychosis, 19.3%. However, no case of schizophrenia and an expectation rate of 10.9% for manic-depressive psychosis were found in the remaining 10 sibships whose parents showed a combination of a schizophrenic process and a depressive psychosis which occurred in older age groups. The most plausible explanation of these findings seems to be that a certain number of affective psychoses with schizoid admixtures genetically belongs in the group of schizophrenia.—*F. J. Kallmann* (New York State Psychiatric Institute).

**4054. Silverman, D.** Prognosis in schizophrenia; a study of 271 cases. *Psychiat. Quart.*, 1941, 15, 477-493.—Records of 271 schizophrenic patients admitted to the Menninger Sanitarium between the years 1925 and 1938 are studied. Recoveries were obtained in 40% of all patients; full remissions occurred at a constant rate of about 10%. The length of hospitalization bore some relationship to the immediate outcome, but little to the ultimate prognosis. Schizophrenia occurred most frequently in the third decade of life; patients in the second decade had the best immediate, but the poorest long-time outcome. Acuteness of onset was one of the most important prognostic factors; illness under 6 months' duration offered the best prognosis. The immediate therapeutic response of women was better than that of men; but the prognostic outlook was the same. An excellent prognosis can be expected from pharmacological shock treatment for schizophrenics with illness of less than one year's duration.—*A. Weider* (N. Y. U. Medical College).

**4055. Smith, P. L.** Alcoholics Anonymous. *Psychiat. Quart.*, 1941, 15, 554-562.—A discussion of the group known as Alcoholics Anonymous is given

together with the aims and methods of approach and facilities for treatment. The consensus among the member alcoholics is that an alcoholic can make a better approach to another alcoholic than can a person who is non-alcoholic. The author lists the steps in the program of rehabilitation and recovery as they appear in the organization. "The results obtained by this handling of the alcoholic problem show a marked improvement over earlier methods." —A. Weider (N. Y. U. Medical College).

4056. Sprague, G. S. **The organic in psychotherapy and psychogenesis.** *Psychiat. Quart.*, 1941, 15, 715-723.—The causal relationships between the functional and the organic are investigated in an attempt to clarify the meaning of psychogenesis. The author, in order to convey similar conceptions to all, offers definitions for many old terms of psychotherapy. It is suggested that psychogenesis can never take place from outside the subject's organism and that "all therapy originating externally to the patient can have no other than an organic mode of influencing the patient." Hence, true psychotherapy can be accomplished through the channels of the organic.—A. Weider (N. Y. U. Medical College).

4057. Thomas, J. M. **Alcoholism and mental disorder.** *Quart. J. Stud. Alcohol*, 1942, 3, 65-78.—5 cases are presented to illustrate types of alcoholism.—W. L. Wilkins (U. S. Marine Corps Base, San Diego, Calif.).

4058. Tietze, C., Lemkau, P., & Cooper, M. **Personality disorder and spatial mobility.** *Amer. J. Sociol.*, 1942, 48, 29-39.—Data collected in a survey by the Mental Hygiene Study of the Eastern Health District in Baltimore are analyzed. By the use of carefully adjusted rates it is demonstrated that the population living for the shortest time in the same house shows the highest prevalence of personality disorder. Intra-city mobility seems to be a much more important factor in this connection than inter-community migration.—D. L. Glick (Brown).

4059. Wright, C. **Reading disability as a factor in personality maladjustment.** *Ment. Hyg. Bull., Indiana Soc. ment. Hyg.*, 1942, 1, 3-8.

[See also abstracts 3860, 3877, 3892, 3896, 3928, 3975, 4060, 4066, 4083, 4130, 4161, 4200, 4206, 4210.]

#### PERSONALITY AND CHARACTER

4060. Barnette, W. L. **Study of an adult male homosexual and Terman-Miles M-F scores.** *Amer. J. Orthopsychiat.*, 1942, 12, 346-352.—This is a study of a well-adjusted and cultured homosexual, giving case history and psychiatric data, intelligence and personality test scores, and scores on the Terman-Miles Masculinity-Femininity Scale.—R. E. Perl (Jewish Board of Guardians).

4061. Davidoff, E., Reifenstein, E. C., & Goodstone, G. L. **Personality and habitus in organic disease.** *Psychiat. Quart.*, 1941, 15, 544-553.—The adjustment to hospitalization, the personality integration, and the physical habitus were studied in

100 cases on the medical ward of a general hospital. 44% were found inadequately adjusted to the hospital regimen, 38% having poorly-integrated personalities. An unfavorable reaction to hospitalization seemed to depend largely upon the previous personality integration, and to some extent upon the severity of the illness, the social and economic factors, and the habitus. The cases were further analyzed and classified as to body build in order to arrive at a correlation with personality; no such correlation seems to exist, although the dysplastic type was the most poorly-integrated and responded least satisfactorily to the hospital routine.—A. Weider (N. Y. U. Medical College).

4062. Edwards, A. L. **The development of an anxiety scale.** *J. appl. Psychol.*, 1942, 26, 187-196.—6 broad areas of worry (health, contemporary affairs, sex, social relations, persecution, and neuroticism) were selected as probably common to many individuals. The word list was based on Part IV of the Pressey X-O test and expanded with additional words drawn from clinical case books and neurotic inventories. Preliminary trials reduced the number of words to 50 for each of the 6 areas. The tentative norms published are based on the administration of the scales to 349 students. The reliability coefficients of each of the scales are high.—W. F. Madden (Middlebury).

4063. Hotelling, H. **Problems of prediction.** *Amer. J. Sociol.*, 1942, 48, 61-76.—This is one of 4 papers devoted to a critical analysis of *The prediction of personal adjustment*, edited by Horst (see XVI: 1968). The present article consists chiefly of comments on some of the fundamental general problems of prediction (i.e. of mathematical statistics) discussed in the book. A rejoinder by Louis Guttman follows on pages 80-84, commenting upon 3 of the major points raised by Hotelling: (1) the problem of predicting from one sample to another, (2) the problem of multiple criteria, and (3) the competence of social scientists in statistical prediction.—D. L. Glick (Brown).

4064. Johnson, E. H. **Personality and religious work.** *Amer. J. Orthopsychiat.*, 1942, 12, 317-324.—The Bernreuter scores of 150 seminary students were compared with those of 150 successful insurance salesmen. No one of the student groups was homogeneous with regard to any of the Bernreuter categories, but the salesmen were a homogeneous group with regard to dominance. There is some discussion of the diverse ideals and goals of the religious worker.—R. E. Perl (Jewish Board of Guardians).

4065. Landis, J. T. **What is the happiest period in life?** *Sch. & Soc.*, 1942, 55, 643-645.—Of 450 interviewed individuals over 65, 7% were unable to state what period of their life had been the happiest. 50% said they were happiest between 25 and 45, 20% chose 15-25, 18% chose childhood, and 5% middle and old age. The chief determining factor in happiness appeared to be married and family life, although finances and health influenced the choice

of young adulthood. Those who preferred old age usually were widowed or divorced and reported an unhappy married life. Many of those who chose childhood were still unhappy in marriage. 2/3 of single people were happiest in childhood and youth as against 1/3 of married people. Evidently childhood is not the happiest period in life, except for those who do not marry. For those who do, the happiest period is when they are working hardest and bringing up a family.—*M. Lee* (Chicago, Ill.).

**4066. Levine, K. N., & Grassi, J. R. The relation between blot and concept in graphic Rorschach responses.** *Rorschach Res. Exch.*, 1942, 6, 71-73.—In the graphic Rorschach technique, the subject is free to represent the object he sees in the blot by copying or modifying blot features. From a study of 1700 separate drawings obtained from 150 subjects, it was found that they fell into a continuum ranging from a "blot dominated" response at one extreme to a "concept dominated" response at the other extreme. The former response type group included general paretics, brain injuries, arteriosclerotics, and alcoholics with demonstrable organic pathology. "Another group of patients who evidenced blot dominance of less extreme variety included largely the deteriorated schizophrenics, some depressives, some mental defectives and no normals." Clinical groups are not as readily isolated in the concept dominated records. "Extreme forms of behavior occur in convulsive disorders without organic defect, and some manics; minor degrees of concept-dominance occur in a heterogeneous group, including many normals." Dominance of either percept or concept reflects an unsuccessful adaptation to the reality situation. The graphic Rorschach method is suggested as a tool by which the interrelations of the perceptual and the conceptual function may be investigated.—*R. E. Horowitz* (Washington, D. C.).

**4067. Maslow, A. H. Social personality inventory for college women.** Stanford University, Calif.: Stanford University Press, 1942. 100 copies, \$4.50; specimen set, 25¢.—"The purpose of the Social Personality Inventory is to detect and measure the level of self-esteem or self-evaluation of an individual by discovering something about all the individual variables which either go to make up the syndrome of self-esteem or are correlated with it." The inventory consists of 27 questions to be answered by checking a word or phrase (of 5 given) that is nearest true for the subject and that most closely expresses her attitude or feeling, and 25 items to be answered by encircling -2, -1, 0, +1, or +2 to express the feeling of like or dislike. The test was clinically derived and was validated on subjects who had been carefully studied clinically. It therefore "relies on a clinical validation with an external criterion of validity and reliability rather than on mere statistical techniques." Statistical reliabilities are .90 (repeat) and .88 (split-half). Various other measures are given as well as correlations with other tests. The author suggests uses

for the test and certain cautions in its use.—*L. M. McCabe* (Cambridge, Mass.).

**4068. Rapaport, D. Principles underlying projective techniques.** *Character & Pers.*, 1942, 10, 213-219.—According to the projective hypothesis "all behavior manifestations of the human being, including the least and the most significant, are revealing and expressive of his personality, by which we mean that individual principle of which he is the carrier." In this formulation the term behavior includes: behavior viewed both historically and statistically, bodily behavior (voluntary, habitual, and expressive movements), and internal behavior (percepts, fantasies, and thoughts). "The realm of behavior to which the projective technique is applied should not be a conventionalized one nor one remote from the core of the personality." In light of the characteristics revealed in the study of the projection technique, various instruments arrange themselves in a hierarchy. Such tests as the Rorschach, the Szondi, and the Thematic Apperception Test stand at the top, since they satisfy strictly the requirements of such a technique. Tests which may be used with profit but which are inadequate are concept-formation tests and intelligence tests. Other instruments or techniques, such as graphology, painting, drawing, finger painting, clay modeling, and play techniques, fall between these extremes.—*M. O. Wilson* (Oklahoma).

**4069. Sanford, F. H. Speech and personality: a comparative case study.** *Character & Pers.*, 1942, 10, 169-198.—A method of studying personality by analyzing the oral speech of the subject is described, illustrated, and discussed. Intensive statistical analysis is made by means of 234 mechanical, grammatical, psychogrammatical, and lexical categories. The method is highly objective and reliable since analysis of the same samples one year apart yielded very similar results. Characteristics of the two personalities used as sample cases are very distinct: Subject M is complex, complete, uncoordinated, cautious, perseverative, deferent, and stimulus-bound. Subject C is colorful, confident, emphatic, direct, dynamic, progressive, well coordinated, independent, given to evaluation and to sweeping statements.—*M. O. Wilson* (Oklahoma).

**4070. Tubbs, W. R. A study of the interrelationships between the Adams-Lepley Personal Audit and the Bernreuter Personality Inventory.** *J. appl. Psychol.*, 1942, 26, 338-351.—College students and nursing school candidates were given both the Bernreuter and the Adams-Lepley (Form D) tests, and certain intercorrelations were derived. It was found that (1) the intercorrelations between the parts of each respective test are about the same as reported by the authors of the two tests, (2) the correlations of the parts of Adams-Lepley test are for the most part independent of the Bernreuter test, (3) reliable differences due to sex and age exist for most parts of both tests.—*W. F. Madden* (Middlebury).

4071. Wagner, L. E. Caroline Schlegel—1763-1809: a study of personal adjustment to social life and scientific development. *Psychiatry*, 1942, 5, 203-208.—Brief appreciative discussion is given of Caroline Schlegel as an outstanding woman of her period who reflects the influence of society and its times upon the individual and who, through a formative participative interest in the French Revolutionary period, discloses the role of the individual in influencing society.—M. H. Erickson (Eloise Hospital).

[See also abstracts 3864, 3979, 3983, 3988, 3991, 4006, 4008, 4009, 4028, 4097, 4117, 4120, 4172, 4194, 4214.]

#### GENERAL SOCIAL PROCESSES

(incl. Esthetics)

4072. Allport, G. W. The nature of democratic morale. In Watson, G., *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 3-18.—Morale, a background condition in living, has to do with individual attitude in a group endeavor. "By high national morale we mean (a) the healthful state of the convictions and values in the individual citizen that endows him with abundant energy and confidence in facing the future; (b) his decisive, self-disciplined effort to achieve specific objectives that derive from his personal convictions and values; and (c) the agreement among citizens (especially in times of crisis) in respect to their convictions and values and the co-ordination of their efforts in attaining necessary objectives." There is a real distinction between democratic and totalitarian morale. Democratic morale has 11 unique features which should be kept in mind as we seek to build morale. These are: voluntary wholehearted participation, respect for the person, universalism, economic self-respect and social status, majority rule, representative and evocative leadership, tolerance, freedom of speech, the whole man, war never an end in itself, voluntary co-ordination of effort. "In the co-ordination of the intelligences and wills of one hundred million 'whole' men and women lies the formula for an invincible American morale."—S. S. Sargent (Barnard).

4073. Allport, G. W. Morale and its measurement. *Publ. Policy, Harv. Univ.*, 1942, 3, 3-17.—This article suggests a general framework for the construction of an index of morale. From preliminary considerations of what is meant by high morale, it is suggested that to estimate the state of morale, one should attempt to find answers to three questions. These are: "(1) Are the ground conditions healthy? That is to say, are our convictions firm and our resources in confidence and courage adequate? (2) Do we as individuals have definite aims and decisive purposes that will transform our sentiments and courage into effective action? and (3) Do our aims agree? Are we thinking together in this crisis?" These three questions are discussed. Finally, a list of possible sources of evidence is

offered as a starting point for fact finders.—N. R. Bartlett (Brown).

4074. [Anon.] Students' dissertations in sociology. *Amer. J. Sociol.*, 1942, 48, 97-111.—A list of 101 doctoral dissertations and 167 master's theses in preparation in sociology, including several in social psychology and social anthropology, as compiled from returns from letters sent by the editors of the *Journal to departments of sociology*.—D. L. Glick (Brown).

4075. [Anon.] Gallup and Fortune polls. *Publ. Opin. Quart.*, 1942, 6, 302-318.—A topically arranged compilation of AIPO and Fortune poll results for the first quarter of 1942.—H. F. Rothe (Minnesota).

4076. Aubin, H. [Notes on pathologic psychology in negroes.] *Hôpital*, 1940, 28, 185 ff. [Abstracted review; original not seen.] The nearness of the negro race to its primitive beginnings and the relatively late advent of the negro into the social world of the white man have resulted in special problems of adaptation. The negro is governed primarily by impulse and by his deep faith in the supernatural world and its mysterious forces. He uses only a portion of his mental equipment, organization being most effective in the sensorimotor and in the diencephalic cortical functions. His mental activities resemble the mental behavior of children, inadequates, and frustrated individuals.—A. Chapani (Yale).

4077. Barkley, K. L. Development of the moral judgment of college students. *Character & Pers.*, 1942, 10, 199-212.—The author first shows that recent studies on moral judgment have been concerned with 4 aspects: genetic development (Piaget, McGrath), influence of the socio-economic environment (Lerner, Abel), relation of intelligence to moral judgment (Lincoln & Shields, Harriman, Chassell), and instruments of measurement (Bromarkle, Fernald, Hartshorne & May, Koh, Sharp, Woodrow). He then presents the results of a comparative study of moral judgment, personality traits, social attitudes, and intelligence of a group of freshmen and one of commercial students in a women's college. The variables emphasized in the study include the factors to which moral judgment is related, the development in moral judgment achieved by each group during the freshman year, and that achieved by the college students during the 4 years in college. 23 references.—M. O. Wilson (Oklahoma).

4078. Bateson, G. Morale and national character. In Watson, G., *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 71-91.—National differences are culturally conditioned; the author considers the implications of such differences "for the common character of the individuals who exhibit them." The concept of national character, despite criticisms, can be applied if individuals in a given community are described in terms of bipolar characteristics and symmetrical patterns of inter-

personal and intergroup relationships. Qualitatively differing combinations of such complementary motifs as dominance-submission, exhibitionism-spectatorship, succorance-dependence can be noted in English, American, and German cultures. Implications for the building of American morale are given: (1) our enemies should be treated as a single hostile entity; (2) the disasters of war should not be soft-pedaled; (3) Americans, however, need reassurance and news of their successes; (4) a peace treaty "cannot be organized around simple dominance-submission motifs"; alternative solutions are needed.—S. S. Sargent (Barnard).

4079. Bavelas, A. **Morale and the training of leaders.** In Watson, G., *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 143-165.—An experiment is described in which group morale changed as a function of leadership. 6 mediocre leaders were selected, of whom 3 were trained for 3 weeks in democratic techniques and procedures. After their training these leaders shifted from authoritarian and uniform procedures to group methods whose superiority was evidenced by increasing enthusiasm, "holding power," cooperation, self-discipline, and efficiency on the part of the children. Constancy of group membership also grew. The training had striking effects as well upon leaders' morale; it developed enthusiasm, "we" feeling, and perspective for the future. "Because a leader is an important part of the group he leads, any change in the leader will, therefore, affect the morale of the group. There seems, on the other hand, to be no definite relation between the various levels of morale and any single aspect of leadership, such as power, knowledge, or the ability to make quick decisions."—S. S. Sargent (Barnard).

4080. Beckham, A. S. **A study of social background and music ability of superior Negro children.** *J. appl. Psychol.*, 1942, 26, 210-217.—This study is concerned with intraracial differences. 100 intellectually superior, 100 unselected, and 30 musically superior Negro children were given the Kwalwasser-Dykema music tests. The data was analyzed in terms of the IQ differences between groups, music ability and age, and music instructions vs. no instructions. The author summarizes: "The teachers' opinions of musically superior children corroborate test results. The musically superior picked by teachers outrank the intellectually superior. Intelligence was not an important factor in making high musical aptitude scores. Age as a factor was only slight."—W. F. Madden (Middlebury).

4081. Belden, J., & Belden, E. **Student morale.** In Watson, G., *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 298-217.—Student Opinion Surveys, a nonprofit national student poll, found that before Pearl Harbor the average collegian had hardly "reached the state of mind desirable in a nation at the crossroads" and that he ran behind the rest of the country as regards the war. Since the U. S. entered the war, this has changed.—S. S. Sargent (Barnard).

4082. Bernays, E. L. **The integration of morale.** *Publ. Policy, Harv. Univ.*, 1942, 3, 18-32.—America must make her morale impregnable by a three-fold approach: (1) activities aimed at speaking up for democracy, (2) activities aimed at strengthening democracy by making it work better, and (3) a morale commission to give advice to men within the government so that they may function democratically. As a result of these three activities it is hoped that we will attain "physical and emotional well-being, a common goal, common leaders we can trust, and a belief in one another."—R. L. Solomon (Brown).

4083. Boisen, A. T. **Religion and personality adjustments.** *Psychiatry*, 1942, 5, 209-218.—A survey was made by the minister of the personality adjustments of the residents of a village of 500 inhabitants. Report is given of the findings to disclose how religion enters into the common life of the American people, how it affects their beliefs, their conduct, and the organization of their personality. Topical headings are: the faithful, the complacent, the pagan, the mentally ill, the difficult, the defeated, the distressed, the reorganized, the omni-presence of the mentally ill, the static character of Springville's religion, how the community standards are implanted, and the altar fire. The conclusion reached from this study is that religion plays a definite role in stabilizing both the individual and the community.—M. H. Erickson (Eloise Hospital).

4084. Bryan, A. I., & Wilke, W. H. **Audience tendencies in rating public speakers.** *J. appl. Psychol.*, 1942, 26, 371-381.—Through the use of the Bryan-Wilke Scale by a large variety of audiences, it was possible to analyze the analytical ability of the audience, the variability of the audience reaction, the influence of the length of time interval between hearing the speaker and rating him, the effect of age of the raters, the influence of sex, and the rating of intelligence and personality of the speaker.—W. F. Madden (Middlebury).

4085. Burling, T. **A neglected psychiatric responsibility.** *Psychiatry*, 1942, 5, 163-164.—A problem of increasing world importance is represented by racial and nationalistic attitudes. Nothing is really understood about the development of such attitudes, and efforts to understand them tend to be limited to introspective studies or to the drawing of analogies between the dynamics of development of personal attitudes and the assumed dynamics of group attitudes. Psychiatrists are in a position to learn much about the development of these racial and national attitudes, particularly so American psychiatrists because of the polyglot nature of the population.—M. H. Erickson (Eloise Hospital).

4086. Cameron, D. E. **Mechanics of civilian morale.** *Dis. nerv. Syst.*, 1942, 3, 166-169.—The author's purpose is to discuss the application of what is known about the control and administration of morale. Present inadequacies in this field are due to confusion among the social scientists with respect to responsibility for maintenance of morale, and to

their unpreparedness to deal with the field as a whole. The contribution of psychiatry is discussed, methods employed to raise morale during the first World War are described and criticized, and measures which have been taken by modern states to preserve morale are reviewed. It is suggested that the control of morale in this country should be set up in accordance with 3 main principles: (1) co-operation of the social sciences in any given organization, (2) promotion of local effort and initiative, and (3) central organization.—*C. E. Henry* (Western Reserve).

**4087. Canady, H. G. The American caste system and the question of negro intelligence.** *J. educ. Psychol.*, 1942, 33, 161-172.—Social environment and intelligence-test scores of 497 entering students at West Virginia State College for the years 1935, 1936, and 1937 were compared. "Negroes differ among themselves as individuals considerably more than they differ from whites as a group. Negro youths of the higher social levels achieve, on the average, higher intelligence scores than do those of lower social levels." These results support the conclusion that "reported Negro-white differences in intelligence test performance are due in all probability to the Negro's position in the American social system." "The task of American society . . . is to work to correct the social inequalities which cause the present intellectual inequalities."—*J. W. Macmillan* (Maryland).

**4088. Casey, R. P. Oedipus motivation in religious thought and fantasy.** *Psychiatry*, 1942, 5, 219-228.—Unlike literature and art which are primarily expressive of the individual, religion demands both personal and social expression and thereby offers material for an understanding of group psychology. Hence the question arises why, among the major fields of sublimation, religion draws men together and what the psychological nature of this bond may be. The answer appears to be Freud's statement that the Oedipus complex is unique in being normally and regularly suppressed rather than resolved. For this reason its influence upon the consciousness is not dissipated, but becomes the foundation for character development. Hence the persistence of this common nucleus of conflict leads to a search for a socialized expression out of which have emerged religion and religious organizations. The characteristics of the Oedipus complex, as shown in child-parent attitudes, security, supervision and punishment needs, the establishment of independence and guilt reactions are all reflected in the structure of religion. The author then discusses at length the problem of guilt as it was met in early Christianity to show that the activity of the Oedipus complex was clearly present.—*M. H. Erickson* (Eloise Hospital).

**4089. Charles, C. V. Optimism and frustration in the American negro.** *Psychoanal. Rev.*, 1942, 29, 270-299.—The behavior and personality of Wright's Bigger Thomas are analyzed in detail, Bigger being taken to represent the westernized negro. The

author concludes that Bigger is a neurotic whose crimes are an outlet for his emotional tensions. His neuroticism is due in part to social pressures which prevent his making adequate adjustments, and hence create tensions, and to his gradual acceptance of the white man's low expectations as to his character traits and hence of his own primitive impulses.—*L. B. Heathers* (Smith).

**4090. Clark, K. B. Morale among negroes.** In *Watson, G., Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 228-248.—"The basic factor of negro morale . . . is frustration, complicated by deep-seated bitterness and resentment at the mockery of democracy of which so much of their lives is a constant reminder." Negro attitudes toward the war ranged in the prewar period from all-out aid to the democracies all the way to pro-fascist sentiment. But "each point of view is primarily concerned with the goals and struggles of the Negro against immediate oppression, and only secondarily with the broader issues of theoretical democracy versus foreign fascism." In addition to frustration, Negro morale comprises hope, conflict, suspicion, and apathy. "The building of an adequate morale in the Negro group entails a sudden, dramatic, and honest reversal of the present American policy of racial exploitation and humiliation." Such a change should begin within the armed forces.—*S. S. Sargent* (Barnard).

**4091. Cook, P. H. The application of the Rorschach test to a Samoan group.** *Rorschach Res. Exch.*, 1942, 6, 51-60.—The Rorschach test was administered to 50 male Samoans in the first and second years of a Mission high school. Findings include overemphasis of whole responses, marked use of white spaces on the cards, extremely high percentage of *F* responses, twice as many *FM* as *M* responses, frequent chiaroscuro responses, infrequent texture responses, frequent use of black, grey or white as color, heavy weighting of *CF* and *C* responses, preponderance of animal and anatomical over other content responses, very few original responses, preference for card X, and dislike for card V. The author discusses deviations from European norms in terms of aspects of Samoan culture and concludes that "the Rorschach test cannot be interpreted for Samoans in terms of the criteria established with other cultural groups."—*R. E. Horowitz* (Washington, D. C.).

**4092. Dannheim, E. Ein seelenkundlicher Bericht aus der isländischen Hauptstadt Reykjavik.** (A psychological report from the capital of Iceland, Reykjavik.) *Rasse*, 1939, 6, 217-224.

**4093. Eysenck, H. J. The experimental study of the 'good Gestalt'—a new approach.** *Psychol. Rev.*, 1942, 49, 344-364.—The concept of the good Gestalt has been criticised for vagueness; it can be clarified by relating it to the principles formulated by writer's aesthetics, to define beauty. Concepts like unity in variety, perfect energizing, etc., are replaceable by a formula provisionally given as *O* (order) times *C* (complexity). The various factors entering into

aesthetic appreciation, i.e. the T, K, and specific factors, experimentally isolated, are reviewed. Those factors active in the process of perception involve the same O and C elements which enter into the aesthetic formula, so the laws of aesthetics can be reduced to those of perception. This is attempted on the basis of Gestalt theory as follows: "The pleasure derived from a percept as such is directly proportional to the decrease of energy capable of doing work in the total nervous system, as compared with the original state of the whole system." Three corollaries of the law are deduced.—A. G. Bills (Cincinnati).

4094. French, T. M. **The psychodynamic problem of democracy.** In Watson, G., *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 19-29.—What is the interplay of forces, particularly motives, upon which successful democracy depends? Rebellion against tyranny is one element, but it must be coupled with the gradual learning of self-government. The struggle to gain preference and domination over others is found both in the growing child and in the adult. The ideal of political equality, motivated by the need for group security and solidarity, is "a reaction formation against these wide-spread motives that set every man against his fellow." As with the individual, the community throwing off autocratic rule must gradually "renounce the security of being children in the parental home, to substitute in its place the pride of independence and achievement and the satisfaction of mutual devotion to each other and to the group as a whole." Individual interests, however, must not be too easily surrendered to the supposed welfare of the state. The experience of mutual sacrifice for the common good binds a people together most effectively. Public discussion plays a vital part in developing the art of self-government.—S. S. Sargent (Barnard).

4095. Gillin, J. L., & Gillin, J. P. **An introduction to sociology.** New York: Macmillan, 1942. Pp. viii + 806. \$3.75.—The chief divisions of this book are: the natural bases of social life, the social bases of society, social institutions, social change, social control, social processes, and social pathology. There are several references to psychological researches. A full index of authors and subjects is provided.—W. Dennis (Louisiana).

4096. Groves, E. R., Groves, G. H., & Groves, C. **Sex fulfillment in marriage.** New York: Emerson Books, 1942. Pp. 319. \$3.00.—The goal of this book is to give "first, information that the newly married will want that they may be able to cope better with their new sex experience, and, second, facts that all married persons need to know if they are to get from their sex life together all that it has to give." Among the topics discussed are: experiences that influence sex, courtship, anatomy and physiology of sex, starting marriage, sex rôle of husband, sex rôle of wife, common marital problems (particularly amount of intercourse and impotency), sex hygiene, birth control, pregnancy and childbirth,

and sex as a human satisfaction.—D. R. Riggs (Providence, R. I.).

4097. Hallowell, A. I. **Acculturation processes and personality changes as indicated by the Rorschach technique.** *Rorschach Res. Exch.*, 1942, 6, 42-50.—The Rorschach test was administered to two samples of American Indians, one consisting of 58 individuals and the other of 44, representing populations of characteristically greater and lesser acculturation. The more isolated and less acculturated group showed fantasy domination, egocentricity, suspiciousness, deliberation, caution, and precision in approaching problems—a predominantly introversive picture, with practical overtones. The author believes this personality picture is attributable to a cultural background which emphasizes fantasy rather than reality testing. The more acculturated group responded to the cards more quickly than the other and showed a greater number of extraversive individuals. When both samples are considered together, the latter group furnishes much higher percentages of both best adjusted and most maladjusted individuals than the less acculturated group. Twice as many men as women fall into the maladjusted category in the acculturated group.—R. E. Horowitz (Washington, D. C.).

4098. Hamilton, T. **Social optimism and pessimism in American protestantism.** *Publ. Opin. Quart.*, 1942, 6, 280-283.—An analysis of some sermons published between 1929 and 1940 indicates an increase in social pessimism and a movement away from the "social gospel" in protestant pulpits.—H. F. Rothe (Minnesota).

4099. Hillman, A. **Are other races "brainy"?** *Sch. & Soc.*, 1942, 55, 615-617.—In an article in *Hygieia* Donald Laird states that although one white child in 100 has a chance of being "brainy," only one negro child in 30,000 and practically no Indian child has this chance. This statement is based on Carroll's *Genius in the making* (see XIV: 5248) and neglects other source material. There is no justification for such a conclusion, and its publication does harm.—M. Lee (Chicago, Ill.).

4100. Honigman, J. J. **An interpretation of the social-psychological functions of the ritual clown.** *Character & Pers.*, 1942, 10, 221-226.—In a cultural society, certain social functions, such as religion, instill in the individual a sense of helplessness and fear. One of his fundamental psychological needs as well as tendencies is to establish some degree of order and pattern into an environment that threatens him. Through clowning and burlesque the incomprehensible and uncontrollable are distorted into a more familiar form. As an example of this approach, the author discusses the ritual clown as found among the Indians in the southwestern part of North America.—M. O. Wilson (Oklahoma).

4101. Jaffe, A. J. **Urbanization and fertility.** *Amer. J. Sociol.*, 1942, 48, 48-60.—Urban-rural differential fertility was studied in a number of non-European countries as of the present time, and in a number of European nations and in the United

States during the early nineteenth century. With but one exception the rural fertility rate was observed to be substantially higher than the urban rate.—*D. L. Glick* (Brown).

**4102. Katz, D.** Do interviewers bias poll results? *Publ. Opin. Quart.*, 1942, 6, 248-268.—A control staff of white-collar interviewers of the American Institute of Public Opinion, and an experimental staff of working-class interviewers, working under the same instructions, did not find the same public sentiment on labor and war issues. Thus it appears that the social status of the interviewer influences the findings he reports.—*H. F. Rothe* (Minnesota).

**4103. Ketchum, J. D., & Bois, J. S. A.** Morale in Canada. In *Watson, G., Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 249-270.—The first author reports on Canadian civilian morale in general; the second, on those aspects peculiar to French Canadians. Canadian morale is steadily improving. It is closely connected with U. S. morale. "Morale-raising efforts, couched largely in the stereotypes of the last war, have been conspicuously ineffective in arousing the emotional response sought for." Investigation of a student group shows a great rise in conviction about the war. "French and English in Canada live in two worlds with little communication between them," except for respect toward the British crown. The general orientation of the French is otherworldly, hence the war must be viewed as religious and defensive.—*S. S. Sargent* (Barnard).

**4104. Klineberg, O.** Morale and the Jewish minority. In *Watson, G., Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 218-227.—If morale is threatened by the presence of minority groups, it is because of majority prejudice against them. A review of attitude studies shows no trend toward an increase in anti-Semitism; "the Jews occupy a position midway between those ethnic groups which are most liked and those most disliked." U. S. entry into the war can hardly be blamed on the Jews, though war losses may lead to aggressions against them. American Jews have "a feeling of belonging to the whole American community as full participants in the struggle against a common enemy."—*S. S. Sargent* (Barnard).

**4105. Koffka, K.** The art of the actor as a psychological problem. *Amer. Scholar*, 1942, 11, 315-326.—The characteristic of seeming to be possessed by emotions is defined as psychic richness. Actors are endowed with a much higher degree of psychic richness than average people. Psychic richness is perceived directly as a whole-response to a pattern of stimulation. Inanimate objects and shapes frequently possess psychic richness. The actor's problem is making the spectator aware of the particular life indicated in his rôle. The spectator perceives the actor's rôle because the apparent inner life of human beings, as indicated by their activity, corresponds, although with distortions, fairly well to their real inner life. This activity

corresponds to the cultural patterns of an actor's group, and the great actors of the past would, thus, be not great today.—*L. H. Beck* (Brown).

**4106. Lehman, H. C.** Optimum ages for eminent leadership. *Sci. Mon., N. Y.*, 1942, 54, 162-175.—The thorough investigation of this topic required the collection of data for: specific types of leadership, the ascertaining of the chronological ages at which men have most often attained leadership, and the ages during which such leadership was exercised. Different categories show varying ages at which leadership is at peak. The conclusion drawn is that leadership optimum ages are not so much a function of the physiological factors associated with chronological age as they are a function of social conditions and expectations.—*R. L. Solomon* (Brown).

**4107. Lewin, K.** Time perspective and morale. In *Watson, G., Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 48-70.—Hope, an ingredient of morale, implies a psychological future which is part of time perspective. The actions, emotions, and morale of an individual depend upon his time perspective. So do tenacity and persistency in the face of suffering or obstacles, as shown by experiments. This ability to 'take it on the chin' is an aspect of a more fundamental state characterized by initiative, productivity, and a determination to reach certain goals. A realistic yet rising level of aspiration seems a criterion of high morale. In regard to group morale the importance of definite goals is indicated, "not those goals which can be reached easily but a psychological future with obstacles and high goals." Good morale implies the choosing of goals neither too immediate nor too distant, and being convinced that one's action leads in the desired direction. A postscript comments on American morale since the country entered the war.—*S. S. Sargent* (Barnard).

**4108. Murphy, G.** Essentials for a civilian morale program in American democracy. In *Watson, G., Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 405-436.—"An American morale program must be based upon something that most Americans really believe"; this is best exemplified in our Jeffersonian democratic tradition. The locus of such a program should be both in a central administration and in local, democratically functioning organizations. Immediate obstacles to good morale are apathy, skepticism, and inadequate standards of health and security. These can be combated in part by dissemination of facts and by long-range planning both for the war and for the peace to follow. Another essential is a positive program of action continuously treating the sick parts of our economic system. Morale must be striven for on the intellectual, labor, and business fronts. A central federal morale agency would be one way of dealing with the problems that arise; "failing this, the consolidation of morale work can be achieved through the cooperation of existing private services." A planned and coordinated social science research

program is basic to the success of our morale service, present and future.—*S. S. Sargent* (Barnard).

4109. **Newcomb, T.** *News and morale: a miniature experiment.* In *Watson, G., Civilian morale.* Boston: Houghton Mifflin, 1942. Pp. 175-185.—This experiment "deals with the effects of reported events in Europe upon the willingness of students in a small women's college to approve of increased American aid to Britain." To half the students in April, 1941, a German victory was announced; to the other half, a German defeat. Changes in attitude were recorded on ballots. Most of these changes (all in the direction of favoring more aid to Britain) could be attributed to the announcements, whether of German victory or defeat. For groups hearing contrasting announcements the differences in response were greater for upperclassmen than for freshmen, and where differences occurred they were in opposite directions for the two groups. Degree of information, understanding, and concern explains the varying effects of the same influence. It is concluded: (1) belief that Germany can be defeated without American aid did not deter favoring greater aid to Britain; (2) those best informed and most concerned were most discouraged by German successes; by release from discouragement this group, most of all, was stimulated to favor American efforts to defeat Germany.—*S. S. Sargent* (Barnard).

4110. **Philpott, S. J. F.** *Unconscious mechanisms in religion.* *Brit. J. med. Psychol.*, 1942, 19, 292-312.—A comparison is made between an independently developed point of view and that expressed by Freud in *Moses and monotheism*. After a discussion of the rôle of symbols in thought, patterns of thought under Moses and the prophets are reviewed, followed by the early Christian patterns. It is suggested that we shall probably continue to carry over many of the old archetypes, in ever more symbolic form.—*E. R. Hilgard* (U. S. Dept. of Agriculture).

4111. **Rashevsky, N.** *Contributions to the mathematical theory of human relations.* V. *Psychometrika*, 1942, 7, 117-134.—Previously derived equations for the control of the behavior of one social group by another are developed further. Cases of interaction of three social classes are studied, and the variation of such an interaction with time is investigated. A previously derived equation for the ratio of urban to rural population is generalized, and a theory of interaction of industrial and agricultural classes is outlined. Some of the theoretically derived equations are compared with available sociological data and found in fair agreement.—(Courtesy *Psychometrika*).

4112. **Roosen, R.** *Mikrodiencephalie bei den Kulturvölkern.* (Microdiencephaly among civilized peoples.) *Schweiz. Arch. Neurol. Psychiat.*, 1941, 48, 331-342.—Roosen's thesis is that the increasing disproportion between the fetal brain and the birth canal is the cause of various physical and social disturbances among civilized peoples. The 3 functional capacities of the psyche are the intellectual,

instinctive, and vegetative. The struggle for existence among civilized peoples is concerned almost exclusively with the intellectual psyche. In the competition for space among the different parts of the fetal brain, the cerebrum can expand unhindered, but the diencephalon is checked spatially and has become insufficient for human needs. This regression is evidenced by the increasing prevalence of "diseases of civilization" (endocrine disorders, hypertension, hereditary ocular diseases, endogenous psychoses), the common cause of which is hypothalamic insufficiency. The instinctive psyche has 2 functions, egoistic and social, the insufficiency of which is the cause of difficulties of life adjustment. The social function disintegrates first, and its defect is compensated by the intellectual psyche. Hence the replacement of social instinct by logical social measures, increasing dissatisfaction, restlessness, craving for amusement, drug addiction, neurasthenia, suicide, religious skepticism, and lowered birth rate.—*M. E. Morse* (Baltimore, Md.).

4113. **Rugg, D.** *American morale when the war began.* In *Watson, G., Civilian morale.* Boston: Houghton Mifflin, 1942. Pp. 189-207.—Office of Public Opinion Research data are analyzed to determine the state of American prewar morale. Danger points are: skepticism of news, lack of positive war aims, complacency, and inequality of sacrifices.—*S. S. Sargent* (Barnard).

4114. **Sargent, S. S.** *Propaganda and morale.* In *Watson, G., Civilian morale.* Boston: Houghton Mifflin, 1942, Pp. 166-174.—The relationship between propaganda and morale is important because propaganda techniques are being and will be widely used to aid in building American morale through the guiding of people's opinions and attitudes in desired directions. There is danger that our morale-building may be taken over by advertising and publicity men. For effective propaganda work existing American attitudes must be known. Some of these are: hatred of war, doubt of a post-war millennium, lack of hatred for the German, Italian, and Japanese people, doubt that our allies are angels, disbelief that all Americans are making equal sacrifices, doubt that our democracy is perfect. Three features of current American attitudes stand out: "(1) a suspicion of purely emotional appeals; (2) a demand for factual evidence; (3) a desire for realizable goals."—*S. S. Sargent* (Barnard).

4115. **Schneider, L.** *Toward an institutional psychology.* *J. soc. Phil.*, 1942, 7, 344-357.—There are both need for and present data in a psychology proper to the social sciences and supplementary to other psychologies. An institutional psychology would consider among other topics such slightly structured phenomena as rural-urban distributions, birth rates peculiar to a class, divorce rates, and suicide rates. There is little in individual psychology to account for such uncontemplated results of human behavior in the mass. Institutions may operate in an "objective" way to affect the character of economy and society (for example, they achieve

specialization of labor), but they may also exercise constraining influences upon human beings and so operate as part of the environment. Studies cited in the field of institutional psychology are Durkheim's analysis of suicide, Von Ungern-Sternberg's discussion of the causes of the decline in birth rate, and Ogburn's investigations of the American family.—W. A. Varvel (Texas A. & M.).

4116. Seashore, C. E. **Artistic deviation as an esthetic principle in music.** *Sci. Mon., N. Y.*, 1942, 54, 99-109.—The fundamental requirement of the artist is the ability to produce true pitch and metronomic time. Besides this the artist must add his own characteristic deviations. Thus musical artistry rests on skillful deviations about a point of reference. Performance scores demonstrating the deviation of famous artists are discussed. The rôle of the scientist in musical esthetics, describing, verifying, and criticizing, is supported.—R. L. Solomon (Brown).

4117. Simmons, L. W. [Ed.] **Sun chief: the autobiography of a Hopi Indian.** New Haven: Yale University Press, 1942. Pp. xi + 460. \$4.25.—The life-history material which formed the basis for this autobiography was given verbally to the editor, who recorded it and then selected and arranged the portions here presented. The arrangement is chiefly chronological, approximately the same amount of space being devoted to each decade of life from birth to the fiftieth year. There are also chapters giving a brief account of the Hopi, their myths and legends, and their kinship system, and an example of situational analysis of life history material.—W. Dennis (Louisiana).

4118. Starch, D. **The 100 greatest books selected by 100 qualified persons.** *J. appl. Psychol.*, 1942, 26, 257-267.—This is believed to be the first attempt to compile a list of the 100 greatest books based on the consensus of a large number of competent persons. 4 persons made a list of any books that might conceivably be considered to be among the 100 greatest. This master list was then sent to various authorities in the fields of literature, philosophy, languages, and sciences. From these ratings the 100 greatest books are listed. In addition, it was found that: (1) there seem to be about 4 groups of great books, (2) from the chronological point of view, there are two fertile periods of literature yielding the greatest proportion of great works, and (3) there are only about 25 "greatest" books.—W. F. Madden (Middlebury).

4119. Szurek, S. A. **The social plight of the social worker.** *Amer. J. Orthopsychiat.*, 1942, 12, 271-283.—This is a discussion of cultural forces that impinge on and create disturbances for social workers. The social worker is a mediator caught in the dilemma created by the opposing principles of her practice and the still current cultural ethic. Her conflicting attitudes may vacillate between hostile contempt and sympathetic identification toward both those in power and those to whom she distributes the insufficient means of security. A dis-

cussion of this paper by Ruth Smalley emphasizes the relationship between the psychiatrist and the social worker.—R. E. Perl (Jewish Board of Guardians).

4120. Tomašić, D. **Personality development in the Zadruga society.** *Psychiatry*, 1942, 5, 229-261.—Detailed study is made of the Zadruga social system in the northwestern part of Croatia, of its psychological make-up at the time of the dissolution of the feudal ties in the second part of the 19th century, of the disintegration of the Zadruga community during the past hundred years, and an account is given of how the Croatian village community has readjusted itself to new conditions. Special attention is paid to the psychological changes which took place in the Zadruga culture during reconstruction, especially the effect of changing culture and social structure upon the personality development of the Croatian peasant and the significances of these forces in the development of the Croatian peasant movement. Topical headings relate to Zadruga self-sufficiency, property relations, social control, division of labor, the training of children, interpersonal relations, changes in the social structure, in interpersonal relations, in family relations, in community relations and in attitudes, readjustment, and the historical background of the Croatian village. 62-item footnote bibliography.—M. H. Erickson (Eloise Hospital).

4121. Van Clute, W. **How fascism thwarts the life instinct.** *Amer. J. Orthopsychiat.*, 1942, 12, 335-338.—Fascism imposed its ideals on the people by taking advantage of the psychological tendency of any people to look upon any powerful and paternalistic authority as a benevolent father. However, more and more followers of fascism will come to look upon the authoritarian state as a bad father. Historically and psychologically, revolt is inevitable under such circumstances.—R. E. Perl (Jewish Board of Guardians).

4122. Vernon, P. E. **A study of war attitudes.** *Brit. J. med. Psychol.*, 1942, 19, 271-291.—A questionnaire was sent in April, 1941 to 550 of the regular correspondents of the director of Mass Observation. Replies were received from 150 men and 80 women. There were 2 questions and 30 statements calling for agreement or disagreement. Responses resolved into a general factor, representing optimism and support for the government's policy, and 5 subsidiary types or shades of opinion which were identified as cheerfulness-complacency, wishful thinking, anti-socialism, projective or paranoid opinions, and moralistic opinions. Scores on these attitudes were intercorrelated with a series of variables such as sex, age, war work, hardships.—E. R. Hilgard (U. S. Dept. of Agriculture).

4123. Waples, D. [Ed.] **Print, radio, and film in a democracy.** Chicago: University of Chicago Press, 1942. Pp. xiv + 197. \$2.00.—These papers "focus upon the problem of administering mass communications in the public interest, that is, for the common good and without exceeding the democratic limits of popular consent." Sections are: govern-

ment policy (mass communications and American democracy, by H. L. Elsten; mass communication under totalitarian governments, by E. Kris); effects on public opinion (the effects of print upon public opinion, by B. Berelson; the effects of radio on public opinion, by P. F. Lazarsfeld; the film and public opinion, by D. Slesinger); implications for social science (communications research and politics, by H. D. Lasswell; the improvement of present public opinion analyses, by H. F. Gosnell; a sociologist looks at communications research, by S. A. Stouffer); implications for institutions (implications of communications research for the public schools, by R. W. Tyler; implications of communications research for the public library, by R. A. Beals).—A. Thomsen (Elmo Roper, Market Research).

4124. Watson, G. [Ed.] *Civilian morale; second yearbook of the Society for the Psychological Study of Social Issues.* Boston: (Published for Reynal & Hitchcock) Houghton Mifflin, 1942. Pp. xii + 463. \$3.50.—"The main purpose of this book is to tell America what scientific investigation of morale has thus far demonstrated." The volume is divided into 5 parts: theory of morale (91 pp.), how morale develops (92 pp.), the state of American morale (83 pp.), morale in industry (130 pp.), recommendations (33 pp.). (See XVI: 4072, 4078, 4079, 4081, 4090, 4094, 4103, 4104, 4107, 4108, 4109, 4113, 4114, 4125, 4126, 4127, 4145, 4212, 4215.) Bibliography and index.—S. S. Sargent (Barnard).

4125. Watson, G. *Five factors in morale.* In Watson, G., *Civilian morale.* Boston: Houghton Mifflin, 1942. Pp. 30-47.—This chapter is a summary and elaboration of a round-table discussion on 'the psychological bases of national morale' held at the 1941 APA meetings. Morale here describes what people do rather than how they feel. The first essential is a positive goal, "a magnetic pole toward which the aspirations of men are drawn." Despite some favorable signs too little attention has been given to defining postwar goals. Morale has been based on negative factors: fear, hatred, anger; these are not enough. A second factor is togetherness, feeling oneself part of a larger group, sharing a common goal. Morale building demands the discovery of common national purposes and a sense of shared living, with social barriers removed. Third: knowledge of common danger contributes to morale, as shown by the effects of the attack on Pearl Harbor. A fourth factor is the conviction that we can do something to improve matters; many of us do not know just how we can help, or how our daily activities further national purposes. Fifthly, morale depends upon "our sense of significant advance," upon well-authenticated knowledge that we are approaching our goal. This is as important to winning the peace as to winning the war.—S. S. Sargent (Barnard).

4126. Watson, G. *Morale during unemployment.* In Watson, G., *Civilian morale.* Boston: Houghton Mifflin, 1942. Pp. 273-348.—Over 500 cases from the New York Adjustment Service (1934) were analyzed. Several indices of morale were selected

from the Bernreuter, Strong, and Hall tests. Occupational morale was found to be independent, statistically, of personal adjustment. Case studies and counselor judgments showed the validity of the scales; e.g., cases chosen from the lowest level of morale revealed personal maladjustment, insecurity, anxiety, indecision, distrust. 89 men referred to a psychiatrist were found to have lower morale than the control group. Other results are summed up in several hypotheses supported by the study: Good morale is positively related to early emotional security, success in the past, marriage and family life, education, interesting and useful work, realistic aspiration, social participation, religion; poor morale is correlated with indecision and anticipation of disaster. The morale of older men sustains traditional values; that of youth "overcomes obstacles in struggles toward improved social conditions." Recommendations are made. Several case studies are presented; also 6 tables and 23 charts.—S. S. Sargent (Barnard).

4127. Watson, G. *Labor unions and morale.* In Watson, G., *Civilian morale.* Boston: Houghton Mifflin, 1942. Pp. 365-401.—4 steps would help preserve high union morale: (1) fair treatment of labor in press, radio, and movies; (2) extension of democracy and purging of racketeers within the ranks of labor; (3) equitable control of profits, prices, and wages; (4) cessation of anti-labor agitation.—S. S. Sargent (Barnard).

[See also abstracts 3962, 4001, 4007, 4044, 4064, 4209, 4212, 4215.]

#### CRIME AND DELINQUENCY

4128. Bearss, H. A. *A study of selected factors in the prison records of five hundred inmates of the State Prison for Southern Michigan at Jackson.* Ypsilanti, Mich.: University Lithoprinters, 1941. Pp. viii + 67. \$0.75.—69% of the 500 prisoners were reared in small communities (population of 15,000 or less), 76% were committed from large communities, 25% had resorted to the use of aliases, 29% claimed gang affiliation, 80% came from broken homes (defined as a home from which one or both parents have been removed by death or divorce), 63% were either first-born sons or only children, 83% came from homes with poor financial status, 56% came from homes in which the mother had to work outside the home, and 43% had juvenile court records. Nationalities and ages at commitment are also given for this group.—A. Chapanis (Yale).

4129. Cassity, J. H. *Socio-psychiatric aspects of female felons.* *J. crim. Psychopath.*, 1942, 3, 597-604.—Of 2800 felons examined last year by the New York County Court of General Sessions, only 4% were women. Disparity between the sexes in the capabilities of physical aggression is suggested as the major explanation for the low proportion of female felons. Differences in the status of men and women in this culture are also important. The proportion of convictions for assault, manslaughter,

and murder to all other crimes is higher for female than male felons. Negresses exceed white female felons in the ratio of 5 to 1 for these crimes. 80% of the defendants were implicated directly or indirectly with a male. Some of the deeper psychological mechanisms encountered among female felons are illustrated.—*A. Chapanis* (Yale).

**4130. Curran, F. J. Specific trends in criminality of women.** *J. crim. Psychopath.*, 1942, 3, 605-624.—"An analysis of 245 women prisoners admitted to Bellevue Hospital during the year 1940 indicates that the average age of the woman prisoner is 36.5, that 20% of the women are colored, that 46.9% are Catholics, 31% Protestant and 18.3% Jewish, that over 75% are native born Americans, that the majority have eighth grade education or less, that only 27.3% of these prisoners are married women living with their husbands, that the majority are vocationally untrained, and that 67% are charged with disorderly conduct, prostitution, drug addiction, alcoholism, or shoplifting." 40% of the prisoners were found to be psychotic, approximately 10% were mentally defective, 18.2% were considered to have psychopathic personalities. Only 15.5% were venereally infected, although 60% had some medical or surgical condition. The examinations verified the findings of others that when women commit serious crimes, their crimes are directed more against persons than against property.—*A. Chapanis* (Yale).

**4131. Devereux, G. Motivation and control of crime.** *J. crim. Psychopath.*, 1942, 3, 553-584.—Punishment as a deterrent and as a warning or example to others has been a failure. This penological theory of hedonism is based on two assumptions: "(1) That the prospective criminal both perceives and 'registers' the prospect of punishment, and (2) That this expectation is a functional force or factor in his intra-psychic economy, i.e. that it is a 'pull' in G. W. Allport's sense, or else a barrier in the criminal's life-space, in Lewinian terms." These assumptions are not justified because of: (1) the affective unreality of punishment and the remoteness of punishment from the time of commission of the crime; (2) the ineffectiveness of punishment administered by an out-grouper, viz. the judge; (3) man's inability to conceive of his own death; (4) the improbability that the criminal will be apprehended and punished; (5) the culture-conflict and ideological distance between criminals and the general population; and (6) the social negativism of the criminal which arises from a certain feeling of pride in his own ability and exploits. The author advocates "an empirical, objective, rational and effective penology, i.e. a penology which is therapeutic."—*A. Chapanis* (Yale).

**4132. Glueck, E. T. Juvenile delinquency in wartime.** *Surv. Midmon.*, 1942, 78, 70-72.

**4133. Jenkins, R. L., Hart, H. H., Sperling, P. I., & Axelrad, S. Prediction of parole success: inclusion of psychiatric criteria.** *J. crim. Law Criminol.*, 1942, 33, 38-46.—Having obtained on the basis of

judgment of clinicians a list of positive and negative weightings of case history factors related to success on parole, cases were reviewed by clinicians and given a parole success score. Psychiatric factors as well as the orthodox factors of offenses committed, home conditions, etc. were included. On the basis of the resultant scores it was possible to distinguish a group of successful from a group of unsuccessful juvenile parolees, though considerable overlapping existed between the two groups.—*L. M. Hanks, Jr.* (Bennington).

**4134. Knigge, F. Abergläube und Verbrechen (Superstition and crime.)** *Z. ges. Neurol. Psychiat.*, 1939, 166, 271-286.—This report on a partially successful suicide pact between two eccentric lovers, who had found refuge from a series of disappointing experiences in the common indulgence in spiritistic ideas and ecstatic love ceremonies, is offered as a typical case of homicide due to delusion-like superstitious beliefs. The pact was executed by the 21-year old boy but conceived by the girl who was 10 years his senior. The injuries proved fatal to the girl, while the boy made a "miraculous" recovery. The girl may have been insane, and the same diagnosis was accepted regarding the boy.—*F. J. Kallmann* (New York State Psychiatric Institute).

**4135. Owens, C. D. Creative potentials and productions of defective delinquents with especial reference to dramatics.** *J. crim. Psychopath.*, 1942, 3, 649-663.—The author directed the work of a dramatics class composed of institutionalized adult male mentally defective delinquents. During the course of two years several one-act plays were staged and a few original ones were written. Samples of the latter are presented. The author concludes that dramatic productions are useful as educational and therapeutic devices, especially when individuals are cast in certain socially approved characterizations. Although their original plays are limited, moron defective delinquents demonstrate a penchant for dramatic effort and are capable of memorizing, timing, and coordinating their lines in a satisfactory manner.—*A. Chapanis* (Yale).

**4136. Pigeon, H. D. Probation and parole in theory and practice.** New York: National Probation Association, 1942. Pp. x + 420. \$2.00.—This is primarily a study manual prepared as a text for use in in-service training programs for probation and parole officers. In Part I there is a discussion, with a survey of historical developments, of each of the following services dealing with the offender: law enforcement agencies, detention, probation, penal and correctional institutions, and release procedures. Part II deals with the behavior of the individual with reference to personality development and its disorders, emotional factors influencing conduct, types of mental disease, abnormal conditions relating to crime and delinquency, mechanisms explaining conduct, and methods of treatment. In Part III the author reviews the development of case work, then proceeds with a discussion of social case work in relation to probation and parole, case study and

diagnosis, case work as treatment, the scope and purpose of case records, and staff supervision. Part IV deals with public relations and publicity. Each chapter concludes with a list of reading references covering books, articles, and special reports.—*P. S. de Q. Cabot* (Simmons).

4137. Rosenzweig, S., Simon, B., & Ballou, M. The psychodynamics of an uxoricide. *Amer. J. Orthopsychiat.*, 1942, 12, 283-294.—This is a rather detailed study of a 48-year old truckman who killed his wife. Medical, psychiatric, and psychological material is presented and organized into a dynamic picture of the case.—*R. E. Perl* (Jewish Board of Guardians).

[See also abstract 4089.]

#### INDUSTRIAL AND PERSONNEL PROBLEMS

4138. Achilles, P. S. Report on the activities of the Psychological Corporation, 1941. *J. appl. Psychol.*, 1942, 26, 151-158.—The activities of the marketing and social research, industrial and personnel research, clinical, test, and testing service for schools of nursing divisions are summarized.—*W. F. Madden* (Middlebury).

4139. Borges Dias, A. [Heterophoria due to fatigue from flying.] *Ophthalmos, Rio de J.*, 1940, 1, 553-562.—[Abstracted review; original not seen.] The author found by means of phorometric examinations that heterophoria may be caused by visual fatigue due to prolonged flying in pilots with normal refraction. Heterophoria from visual fatigue is transient; it disappears by ceasing flying, rest, and physical and mental recreation. There is a certain degree of physiologic heterophoria which is well tolerated except when the physical and psychic resistances of the pilot are diminished. The normal 6-hour work period of pilots should be followed by an 8-hour rest period. The use of prisms is not necessary.—*C. Pfaffman* (U. S. Naval Reserve).

4140. D'Oliveira Esteves, J. V. [Place of pilot in formation flights.] *Rev. méd. lat-amer.*, 1939, 24, 1232-1235.—[Abstracted review; original not seen.] 29 out of 176 pilots showed a tendency to deviate in formation flight either to the right or left. This same tendency was observed when these pilots were tested on the ground by making them walk a straight line when blindfolded. This tendency was increased after rotation in the direction toward which the pilot deviated. These effects are attributed to hypersensitivity of the labyrinth of one side.—*C. Pfaffman* (U. S. Naval Reserve).

4141. D'Oliveira Esteves, J. V. [Psychochronometry in examining and checking aptitude of aviation pilots.] *Rev. méd. lat.-amer.*, 1940, 25, 530-544.—[Abstracted review; original not seen.] The author discusses a test that he has used for more than 15 years. It evaluates attention, memory, adaptability to automatization, rapidity of mental work, and psychosensory phenomena. Attention is examined by reaction time measurements to various

stimuli and by the number of reactions before adaptation to constant attention sets in. Memory is examined by the accuracy, promptness, and coordination of the answers regarding something which has been previously told the examinee. Rapidity of mental work is determined by discrimination reaction time. 100% of those who pass the test prove to be successful pilots.—*C. Pfaffman* (U. S. Naval Reserve).

4142. Fortunato, A. [Physiopathology of dive bombing.] *Rinasc. med.*, 1941, 18, 91-92.—[Abstracted review; original not seen.] Man can tolerate 5 or 6 g. of centrifugal acceleration of short duration. Trained pilots can tolerate 8 g. during short periods. 12 g. causes acute functional disturbance. Acceleration from the head to the feet or vice versa tends to empty the heart and large vessels, forcing the blood to the feet or the head. In the former case, cerebral anemia with black-out may result. In the latter case, cerebral congestion may result which causes the pilot to see red. Various devices to aid in counteracting the effects of acceleration are discussed.—*C. Pfaffman* (U. S. Naval Reserve).

4143. Gillette, F. E. The military aspect of psychological warfare. *Milit. Rev., Fort Leavenworth*, 1942, 22, No. 84, 13-17.—This is a review of Farago's *German psychological warfare* (see XV: 4346; XVI: 2406) and an attempt "to apply those German ideas to our own problems without copying the Germans blindly."—*H. L. Ansbacker* (Brown).

4144. Guest, L. P. Last versus usual purchase questions. *J. appl. Psychol.*, 1942, 26, 180-186.—One questionnaire of usual, and one of last purchase questions were submitted to 224 men and women at the University of Maryland. It was found that brand preferences can be established as accurately from the last purchase questions as from the usual purchase questions.—*W. F. Madden* (Middlebury).

4145. Hull, R. L., & Kolstad, A. Morale on the job. In Watson, G., *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 349-364.—Employees were given a self-administering, objective questionnaire of 60-80 items, dealing with general attitudes toward the employer and the job (used as the measure of morale), various specific attitudes (pay, hours, etc.), and informational items. Almost 44,000 employees from 141 companies showed an average morale score of 69.7, substantially above the theoretical mean. Marked variations between companies, and between departments within an organization, were found. Industrial morale is not determined simply by pay, hours, working conditions; equally important are psychological satisfactions that come with recognition of and respect for the worker's own personality. Supervisors play a large part in determining morale; they may create a generalized employee mental set toward the work. In selecting supervisors business has given too little attention to qualifications for personnel administration. Hence, "much poor industrial morale has been created even in situations where management

has had the best of intentions toward its employees."—*S. S. Sargent* (Barnard).

4146. Jackson, T. A., Jerome, E. A., & Schoenfeld, N. Experimental and statistical analysis of the effectiveness of deodorant creams. *J. appl. Psychol.*, 1942, 26, 308-315.—A deodorant cream was placed under one arm but not under the other of 10 workers who then exercised vigorously on a stationary bicycle. Samples of perspiration were collected through gauze pads which had been tied to the arm pits. After the workout, the pads were placed in air-tight jars. As an index of the intensity of the odor of the perspiration, olfactory reaction time was then measured by passing a mild stream of air over the gauze pad to the judge's nosepiece. Analysis of variance showed a highly significant difference between the effectiveness (in terms of delay in reaction) of the two deodorants used.—*W. F. Madden* (Middlebury).

4147. Jenkins, J. G. Utilization of psychologists in the United States Navy. *Psychol. Bull.*, 1942, 39, 371-375.—Utilization of psychologists by the Navy falls under 3 heads: (1) construction, administration, and interpretation of tests; (2) interviewing, ranging from employment to clinical; (3) special services, covering a wide variety of tasks requiring psychological skills. Psychologists have been commissioned in 4 categories with various rank titles. Most of the article describes the duties of the H-V(S) [Hospital-Volunteer Reserve (Special Service)], which aids in the selection of aviation cadets. At the induction centers, the H-V(S) administers tests, participates in a program of perceptual training, and is available for consultation with instructor and student as psychological problems arise later. At the air stations, the H-V(S) assists in assigning cadets to various types of operation, serves with the indoctrination of personnel in the low pressure chamber, aids in the formulation of exams, and participates in research.—*F. McKinney* (Missouri).

4148. Marañés, —. [Airdrome physician and health of aviators.] *Sem. méd. esp.*, 1940, 3, 981 ff.—[Abstracted review; original not seen.] The airdrome physician is the advisor on matters of hygiene and efficiency, particularly those which concern the training and adaptation of the nervous system, maintenance of emotional balance, and elimination of fear.—*M. E. Morse* (Baltimore, Md.).

4149. Mashburn, N. C., & Marshall, F. A. Aviation medical standards, British RAF vs. U. S. Army Air Corps. *J. Aviat. Med.*, 1942, 13, 62-71.—The British examination begins with a personal and family history, and considerable emphasis is laid on nervous stability, respiratory and circulatory efficiency, and past illnesses. The general medical and surgical examination corresponds rather closely to the American general physical examination. Circulatory efficiency is examined with the aid of the Flack Index. The tests for visual acuity are the same, "however, the lowest acceptable standard for members of air crews, including pilots, is 6/18 in each eye, if vision can be improved to 6/6 in each eye by

glasses." Some color vision defect is permitted if the subject can "read on the Eldredge Green lantern all ordinary red and green tints, although he may interpret pale green as white or orange as yellow." Ocular muscle balance is tested by a rather different set of tests than used by the Americans. Depth perception is not tested, and no refraction is done. There are some differences in the ear tests, while the nose and throat examinations are the same. The British classify a candidate on whether or not he will pilot the plane and whether or not he is combatant. "The American standards are based solely on physical fitness."—*C. Pfaffman* (U. S. Naval Reserve).

4150. Mata, L. [Topographic memory: applicable in military aviation.] *Rev. méd. lat.-amer.*, 1940, 26, 183 ff.—[Abstracted review; original not seen.] The first part of Mata's original test consists in allowing the subject to examine for 1½ minutes a table on which are 20 markers inside 6 different geometric figures. On each marker is a drawing (ship, coin, etc.). He then draws the table from memory, indicating with numerals the number of drawings inside each geometric figure. 16 correct answers out of the 20 is very good. The second part of the test consists in projecting on a screen for 1 minute 4 airplane views showing various topographic elements. The subject then reproduces the pictures, using the signs employed in planimetry and military topography. The grades are based on the capacity for global and detailed topographic perception and reproduction. Tests on 90 pilots indicate that the 2 parts correlate well and that the method is valuable for testing topographic memory.—*M. E. Morse* (Baltimore, Md.).

4151. Mercier, A. [Eye and aviation.] *Gaz. Méd.*, 1940, 47, 99-112.—[Abstracted review; original not seen.] The author considers it advisable, even in the first medical examination, to differentiate between pilots of single seated planes and multi-manned planes. In the former, the requirements are more exacting so that an acuity of 10/10 in each eye is required. In multi-manned planes acuity of 9/10 in one eye and 10/10 in the other would be adequate if binocular vision is satisfactory. Attention is called to the need for promptness of visual perception in aviators. Visual standards can be relaxed with men who are already in the service and who are experienced aviators.—*C. Pfaffman* (U. S. Naval Reserve).

4152. Newman, H., Fletcher, E., & Abramson, M. Alcohol and driving. *Quart. J. Stud. Alcohol*, 1942, 3, 15-30.—150 S's were given 96 tests of coordination, 50 tests of vision, and 45 tests in which coordination and vision were investigated simultaneously; 8 S's were given a careful road test under actual driving conditions. Comparison of performance before and after alcohol ingestion was made. There seemed to be little correlation between losses on the different tests. Diagnosis of intoxication is better made with a battery of tests than with any single test. Most notable was the reduced

resistance to glare. Effect of any given concentration of alcohol in the blood on vision, coordination, and the practical operation of motor vehicles varies widely from individual to individual.—*W. L. Wilkins* (U. S. Marine Corps Base, San Diego, Calif.).

4153. **Paterson, D. G., & Tinker, M. A.** Influence of size of type on eye movements. *J. appl. Psychol.*, 1942, 26, 227-230.—Previous studies have indicated that the best reading performance is achieved with 10-point type as compared with 6-point or with 14-point type. In this study, eye-movement records show that with 6-point type the number of fixations is increased, total perception time is greatly increased, and frequency of regressive movements is slightly increased. The cause for this change in ocular-motor patterns (as compared with 10-point type) seems to be due to reduced visibility. On the 14-point type, there is a striking increase in frequency of fixations, less time per fixation, and a slight decrease in number of regressions. The cause of this reduced efficiency on 14-point type seems to be due to the increased amount of printing area that must be covered in reading a given amount of text.—*W. F. Madden* (Middlebury).

4154. **Pennington L. A., & Case, H. W.** A course in military psychology. *Psychol. Bull.*, 1942, 39, 377-380.—This article presents the outline of a course for advanced military college students. The course is offered by members of the University of Illinois faculty, each presenting the material related to his specialty. It aims to provide officers-in-training with psychological techniques useful in military situations. The topics are: leadership and discipline, morale and group motivation, perceptual problems, efficiency of military personnel, military placement, personality adjustment.—*F. McKinney* (Missouri).

4155. **Seidenfeld, M. A.** The Adjutant General's School and the training of psychological personnel for the Army. *Psychol. Bull.*, 1942, 39, 381-384.—This article describes the history of the school and the instruction offered officers and officer candidates who are training for classification duties. The instructional topics include: psychological problems of the Army interviewing, assignment problems, group tests, rating scales, clinical procedures, individual testing, marginal intelligence, Wechsler Mental Ability scale, statistics, abnormal psychology in the Army, cooperation of psychologists and psychiatrists, analysis of military occupations. Methods of instruction include demonstrations, field trips, clinical laboratory practice, and seminars. Names of the faculty are given.—*F. McKinney* (Missouri).

4156. **Simpson, J. F.** A general survey of otorhinological considerations in service aviation. *J. Laryng.*, 1942, 57, 1-7.—The first deleterious effect of aviation recorded was earache during one of the earliest balloon ascents, in 1783, and today the organ most commonly affected by flying is still the ear. Much of the modern advance in aviation is due to greater engine power; hence, increasing

noise with resultant deafness. The rôle of vibration, not fully understood, will be elucidated by the effects of tank warfare. Hearing tests for aviators are still unsatisfactory. Pure tone audiometry is too lengthy and gives no clue to quickness of interpretation. A rapid, accurate, and comparable method of grading ability to hear speech is needed. Without adequate visual reference to the earth or instruments to correct labyrinthine impressions, a pilot inevitably develops circular motion and vertigo and goes into a spin. This is avoided by flying blind, i.e. disregarding vestibular sensations and relying on instruments. This does not, however, deny the existence of "flying sense" through which the pilot, utilizing the vestibular sense, feels himself one with his plane. It is necessary for aerobatics and landing. The rotation test gives little help in predicting a tendency to airsickness.—*M. E. Morse* (Baltimore, Md.).

4157. **Simpson, R. G., & Sommer, R. C.** Certain visual functions as related to rifle marksmanship. *Sch. & Soc.*, 1942, 55, 677-679.—190 freshmen engineering students who practiced rifle shooting were tested as to lateral and vertical imbalance, visual efficiency, eye coordination, and distance fusion. The correlations between these factors and marksmanship were negligible. Nor did it matter whether or not the student used his preferential eye.—*M. Lee* (Chicago, Ill.).

4158. **Smith, McG.** Mending our weakest links. *Advanc. Management*, 1942, 7, 77-83.—Under the caption 'inventory of ideas' periodic surveys are made of how employees feel about every phase of their relations with the company. Results, tabulated by department and by question, provide the basis for foremen improvement. A similar questionnaire administered to executives provides the raw material for discussions which have been summarized in a book, *Important problems in leadership*. The author is president and general manager of the Florida Power and Light Company.—*H. Moore* (Business Research Corporation).

4159. **Snell, A. C., Culler, A., & Kuhn, H. S.** The field of industrial ophthalmology. *Advanc. Management*, 1942, 7, 91-94.—This field includes 5 phases: the efficient use of vision in industry, eye accidents (their prevention and the treatment of injuries), conservation of visual health, visual economics, and medicolegal ophthalmology. The first phase is discussed in this article. 300,000 eye accidents occur annually; in the U. S. there are 8,000 industrially blind and 80,000 blind in one eye from industrial accidents. To prevent the continuance of this, an adequate service to industry must be provided. Basic to this service is an understanding of all the visual functional factors that are essential to proper visual performance in every kind of job. These factors are: the basic elements in visual performance; the methods and technics of testing; the ways and means for correcting visual defects; the placement of employees according to visual qualifications; an understanding

of the health factors that influence vision; and programs of cooperation for establishing practical methods for visual testing, correction, and placement. A program for testing, examining, and correcting visual defects is being worked out by a joint committee of the Section on Ophthalmology and the Academy of Ophthalmology and Otolaryngology.—*H. Moore* (Business Research Corporation).

4160. Wuerfier, —. [Development of aviation medicine and research in Germany.] *Bull. int. Serv. san.*, 1940, 13, 143-150.—[Abstracted review; original not seen.] This is a brief account of the scientific research conducted in Germany in aviation medicine. The central research institute for aviation medicine is situated in Berlin as part of the ministry of aviation. A smaller institute is housed in one of the hospitals in Hamburg and is devoted to the clinical aspects of the subject. There is close cooperation between aviation medicine and technical research. Aviation research bureaus have laboratories and aeronautical equipment available at the technical institutes.—*C. Pfaffman* (U. S. Naval Reserve).

[See also abstracts 3871, 3904, 3906, 3975, 4202.]

#### EDUCATIONAL PSYCHOLOGY

(incl. Vocational Guidance)

4161. Anthonisen, M. R. Practice of the college psychiatrist. *Dis. nerv. Syst.*, 1942, 3, 175-184.—The author presents the results of 6 years psychiatric practice in a large women's college. During this period there was a shift from work with the more neurotic students to those who were struggling with immediate life problems, usually those related to the college experience. The findings are compared with those in a men's college and a coeducational university. This comparison shows such close agreement among the schools as to warrant the conclusion "that college psychiatric practice deals with the older adolescent with his age-determined problems, in a situation of special demand and competition."—*C. E. Henry* (Western Reserve).

4162. Barham, T. C., Jr. How much progress through progressive education? *Sch. & Soc.*, 1942, 55, 704-707.—The results of the activity program in New York City schools may be considered as a fair indication of how far the principles of progressive education have been successfully translated into practice. The well integrated and adjusted child should be relatively free from fears, yet the data given by Jersild, Goldman and Loftus show little difference between children in activity and in control schools. There is, in fact, a slight but consistent tendency of activity-school pupils to worry more about mastery of school subjects and reproofs by teachers, though less about making recitations and verbal reports. The progressive program evidently is not succeeding in giving children a feeling of security and reducing tensions.—*M. Lee* (Chicago, Ill.).

4163. Barnes, R. A. Is high school adequate preparation for college? *Sch. & Soc.*, 1942, 55, 649-651.—College students and graduates reported in a questionnaire on the adequacy of high-school preparation for the first year of college. 12.6% considered it adequate. 25.9% thought they had been given an insufficient foundation of factual knowledge, especially in English and foreign languages. 22.2% said they had not been trained in good study habits. 20.7% felt they had not been given sufficient opportunity to develop self-discipline and initiative in acquiring information. 15.6% complained they had not been trained sufficiently in clear self-expression, written or verbal. 14.8% emphasized lack of training in rapid and wide reading. Smaller numbers felt the chief inadequacy to be in too little training in reflective thinking, use of libraries, and taking of examinations.—*M. Lee* (Chicago, Ill.).

4164. Brown, C. M. Evaluation and investigation in home economics. New York: Crofts, 1942. Pp. xviii + 461. \$3.50.—This book is divided into two parts. The first section of 10 chapters is devoted to the problems and methods of evaluation as they apply in the field of home economics. This includes a study of the functions, methods, evaluation in relation to objectives, characteristics of good evaluation devices, construction of new-type tests and other evaluation devices, and problems of assigning marks. The second section of 9 chapters is devoted to the problems of scientific investigation, report writing, and elementary statistics. 100 pages of samples of evaluation devices now in use are presented as concrete evidence of what has been achieved in home economics through the use of the evaluation procedure.—*W. F. Madden* (Middlebury).

4165. Brownell, W. A. A method for quantifying the extent of pupils' learning experiences. *J. educ. Res.*, 1942, 35, 565-577.—Description of a method for quantifying the amount of experience pupils have had in phonetic analysis.—*M. Murphy* (Pennsylvania).

4166. Bush, R. N. A study of student-teacher relationships. *J. educ. Res.*, 1942, 35, 645-656.—Relationships between students and their social science teachers in a small private boys' school were appraised using 15 criteria. Among the criteria useful in discriminating between effective and ineffective relationships are: similarity between student and teacher in social beliefs and purposes, harmonious personal relationships between student and teacher, interest of teacher in counselling with students, teacher's effectiveness in teaching techniques.—*M. Murphy* (Pennsylvania).

4167. Cardall, A. J. Test of practical judgment; for 12th grade level and above. (Combined self-scoring and machine-scoring edition.) Chicago: Science Research Associates, 1942. Specimen set, 25¢.—"This test is designed to measure the element of practical judgment as it operates in everyday business and social situations. This measurement is unique and statistically independent of such

factors as intelligence, academic and social background." The test is composed of 48 multiple-choice questions, the one best answer out of 4 to be recorded on the first 9 questions; the first, second, and third choices to be recorded on the others. Reliability, computed on a homogeneous group, is .88 by the method of split-halves and .86 by the Kuder and Richardson formula. Norms based on 319 freshmen at Boston University are presented.—*L. M. McCabe* (Cambridge, Mass.).

4168. Engelhart, M. D. Unique types of achievement test exercises. *Psychometrika*, 1942, 7, 103-116.—In this article are presented a number of unusual achievement test exercises of both the essay and the objective types. These exercises may suggest to others engaged in the construction of achievement tests certain forms which they may find useful either as models or as points of departure in the invention of new forms. The article also calls attention to certain problems which must be solved if achievement testing is to have a sound scientific basis.—(Courtesy *Psychometrika*).

4169. Ferguson, H., & Hovde, H. O. Improving teaching personality by pupil rating. *Sch. Rev.*, 1942, 50, 439-443.—Ratings on 12 teaching-personality traits were obtained from the pupils and the other members of the school staff. Average ratings showed no significant variation for the age groups among the pupils; teachers tended to rate slightly higher than the students. Instruction over a period of 3 weeks in the meaning and judgment of personality was found to lower the mean ratings.—*R. C. Strassburger* (St. Joseph's College for Women).

4170. Font, M. M. Orientation in clinical approach through remedial reading instruction. *Amer. J. Orthopsychiat.*, 1942, 12, 324-335.—The effect of a course in remedial reading and remedial instruction for teachers is presented to show (1) what has been accomplished in remedial teaching by teachers previously inexperienced in such methods, and (2) what has seemed a practical method of orienting teachers in clinical approach and procedures.—*R. E. Perl* (Jewish Board of Guardians).

4171. Freeman, F. N. Controlling concepts in educational research. *Suppl. educ. Monogr.*, 1942, No. 55, 38-47.—Educational research starts with practical problems, but in the pursuit of the answers to these problems it must either appropriate the results of research in the pure sciences or embark on this research itself. "The practical concept, which is the only distinctive concept in educational research, serves to define the problem, to guide the analysis of the problem . . . , to indicate where basic scientific information should be sought, and to give the framework . . . for the solution of the original problem."—*S. C. Erickson* (Arkansas).

4172. Grieder, C., & Newburn, H. K. Temperament in prospective teachers. *J. educ. Res.*, 1942, 35, 683-693.—The Hum-Wadsworth scale was administered to College of Education seniors. No common temperamental element or pattern of components was found to distinguish those who

gave teaching as their first occupational choice, or those making superior grades in practice teaching. Those students whose "normal" values fell below borderline seemed to represent a fair cross-section of the group as a whole.—*M. Murphy* (Pennsylvania).

4173. Hoban, C. F., Jr. Focus on learning; motion pictures in the school. Washington: American Council on Education, 1942. Pp. xiii + 172. \$2.00.—This final report of the director of the Motion Picture Project of the American Council on Education reviews and interprets the role of the motion picture as an aid to learning. Psychological requirements and technical characteristics of effective films are analyzed. The school movie is examined in detail, and pupil reactions to specific films are reported. Actual uses of movies in the schoolroom are described and evaluated. The appendix includes practical information regarding film sources and the services which they offer.—*E. B. Mallory* (Wellesley).

4174. Kopel, D., & Geerde, H. A survey of clinical services for poor readers. *J. educ. Psychol.*, 1942, 33, 209-220.—Replies to a questionnaire sent to reading clinics all over the country indicate that most clinics have highly educated personnel, most of the staff members having advanced degrees; staff size varies considerably with size of case load and other factors; a majority of workers devote full time to the clinics; the clinics vary in length of time that they operate, varying from a few months to full time; most clinics are free, though some charge according to ability to pay; by far the greatest number of cases (78%) are elementary school children, representing in most clinics 90-100% of the cases; schools are responsible for referral of more than 3/4 of the cases, and of all the cases in clinics run by the school system.—*J. W. Macmillan* (Maryland).

4175. Lamb, H. An inquiry into (1) the relative popularity of technical and expressional methods of handwork teaching, and (2) their effect on character development. Part II. *Brit. J. educ. Psychol.*, 1942, 12, 108-116.—Ratings on 12 character traits presumed to be developed by handwork were obtained for 2 groups of 20 boys each taught respectively by the expressional and technical methods. The raters chosen were not associated with the handwork instruction, and their estimates were given at the beginning and end of a period of 9 months. Of the 8 traits demonstrated as valid by the correlations between the different raters, all but industry improved more from the "content" course, allowing a choice of models for handwork, than from the more rigid "technique" course. Pupils of the latter course showed a significant decrease in accuracy and an almost significant decrease in concentration. (See XVI: 2874 for Part I.)—*R. C. Strassburger* (St. Joseph's College for Women).

4176. McCallister, J. M. Purposeful reading in college. New York: Appleton-Century, 1942. Pp. v + 170. \$1.25.—This manual is designed for

use in college reading, English, or orientation classes. Each of the 12 chapters deals with a phase of reading and is followed by a set of practice exercises.—*M. Pankaskie* (Indiana State Teachers College).

**4177. McConnell, T. R.** The nature of educational research. *Suppl. educ. Monogr.*, 1942, No. 55, 1-21.—Educational research and the philosophy of education are interdependent. To promote this relationship more effectively, the author describes certain needs in educational research: (1) thorough knowledge of relevant phases of the basic disciplines which provide the foundations for a given field of educational activity, (2) identifying and formulating the major problems which need to be investigated in the several fields of education, (3) more precise measurement, (4) experimentation at complex levels or organization. Concrete examples of each of these needs are given.—*S. C. Erickson* (Arkansas).

**4178. Palacín Inglesias, G. B.** Valor pédagogico de la actividad y su consideración en la educación de los ciegos. (Pedagogical value of activity and its consideration in the education of the blind.) *Bol. Inst. int. amer. Prot. Infanc., Montevideo*, 1942, 15, 569-586.—If intelligence is in some way the product of experience, then the blind should be put in contact with things of nature as soon after birth as possible. The blind child should never be sheltered; rather, he should be put in a position where he can use all his intact senses to best advantage. Special care should be taken to see that he has as rich experiences as possible, in handiwork, games, association with natural objects. This should stimulate mental activity, so that later the blind person can assume a vocation in some field like agriculture with an intelligent interest.—*R. L. Solomon* (Brown).

**4179. Peachman, M. C.** Attitudes: their significance in education for the gifted. *J. educ. Psychol.*, 1942, 33, 183-198.—Growing recognition of the importance of attitudes, references to attitudes in literature on the gifted, attempts to measure attitudes, attitudes of parents toward the gifted, attitudes of educators, attitudes of the children, and recently expressed attitudes toward the place of the gifted in society are the headings discussed in this article. "When the schools develop the wisdom to collect and meditate upon the attitudes—both expressed and implied—from all sources, when they are able to analyze, evaluate and view them objectively and without prejudice, then will they better understand how to foster desirable attitudes in gifted children. . . . If a child possessing such [superior] intelligence has acquired attitudes of critical thinking, of respect for service and achievement in both himself and others, of understanding and tolerance, and of responsibility toward himself and society, he will in all probability make use of his superior intellect both in school and in the wider sphere of his environment."—*J. W. Macmillan* (Maryland).

**4180. Porter, W. A.** Pupil evaluation of practice teaching. *J. educ. Res.*, 1942, 35, 700-704.—Judgments of high school pupils agreed closely

with judgments of supervising teachers. Student teachers found the pupils' evaluations helpful, and pupils enjoyed the recognition given them in the evaluation program. A copy of the Pupil Check List which was used is given.—*M. Murphy* (Pennsylvania).

**4181. Schneider, G. G., & Berdie, R. F.** Educational hierarchies and scholastic survival. *J. educ. Psychol.*, 1942, 33, 199-208.—Scores on the ACE examination, Cooperative English test scores, and high school rank of the students at the University of Minnesota in all classes and colleges during 1939-40 were compared. "The variables studied here predict grades efficiently in some colleges and apparently bear little relationship to grades in others. This results from unlike objectives of colleges and differential demands for these abilities." There is a "general tendency for sophomores to be superior to freshmen, and juniors to be superior to sophomores in respect to entrance test data. This generalization does not hold in all colleges or with all measures." "These results do not indicate that the academic factors investigated here consistently produce increasingly superior classes. They do indicate that these factors are most effective during the first years." They "suggest that withdrawals in the junior and senior year and voluntary and involuntary departures from the University are probably not expressions of lack of general scholastic aptitude but, perhaps, of deficiencies in specific abilities and financial and other problems."—*J. W. Macmillan* (Maryland).

**4182. Seagoe, M. V.** Some origins of interest in teaching. *J. educ. Res.*, 1942, 35, 673-682.—No difference in pre-teaching experiences was found between college students who were interested in teaching and those of equal status who were not. Personal motivation seemed to be the significant differentiating factor.—*M. Murphy* (Pennsylvania).

**4183. Selover, R. B.** A study of the sophomore testing program at the University of Minnesota. Part I. *J. appl. Psychol.*, 1942, 26, 296-307.—This is the first of 3 reports to appear in an attempt to see if the testing program can be definitely useful in differential guidance. The problem analyzed in this paper, based on data over a 4-year period, is to determine if the tests can differentiate successful major groups. The profiles of performance for some major groups were found similar enough to be combined into 12 larger groups.—*W. F. Madden* (Middlebury).

**4184. Shultz, I. T., & Rush, H.** Comparison of the occupational ranking and interests, education and intelligence of patients at Sunnyside Sanatorium. *J. appl. Psychol.*, 1942, 26, 218-226.—The tubercular patients at Sunnyside Sanatorium show a significant relation between intelligence and number of years spent in school, they are of widely differing vocational backgrounds and occupational abilities, and their occupational level is slightly lower than that of the general population. Individual education and improvement of emotional attitudes through education would probably raise their economic level. Little

relationship was found between vocational interest and intelligence. The Sunnyside population represents a normal sampling of the population at large in spite of their tuberculosis.—*W. F. Madden* (Middlebury).

4185. Simpson, R. G. **The reading laboratory as a service unit in college.** *Sch. & Soc.*, 1942, 55, 621-623.—On the basis of placement tests freshmen are segregated into 3 groups: those whose reading ability score is markedly below, slightly below, or the same as their scores in other tests. The difficulties of the first group and of many of the others are then analyzed, and remedial practice is scheduled. Biweekly attendance at the reading clinic is voluntary and continues until improvement is evidenced. Factor ratios for the practice groups show a large average gain in general academic achievement as contrasted with control groups. Similar scholastic improvement might result from extending remedial assistance into spelling, English expression, and problem solving.—*M. Lee* (Chicago, Ill.).

4186. Simpson, R. H. **Students attempt a self-evaluation of work in educational psychology.** *J. educ. Psychol.*, 1942, 33, 225-230.—A 25-item questionnaire was constructed and given to students in educational psychology courses to help them evaluate their progress in these courses. Questions were concerned with goals toward which to work, organization of work and progress in doing so, general methods of study, and evaluation of work methods. Sample answers to questions indicate that the students found the questionnaire of considerable value.—*J. W. Macmillan* (Maryland).

4187. Stroud, J. B., & Johnson, E. **The temporal position of reviews.** *J. educ. Res.*, 1942, 35, 618-622.—The value of rereading review was measured one day, 15 days, and 29 days after learning, comparison being made with a control group at each interval. The effectiveness of a rereading review was not found to be appreciably affected by its temporal position because the net review value increases as the interval between learning and reviewing increases.—*M. Murphy* (Pennsylvania).

4188. Thorndike, E. L., Woodyard, E., & Weingart, L. **The relation between a person's intelligence quotient and his rate of progress in school.** *J. educ. Psychol.*, 1942, 33, 221-224.—The National Intelligence Examination (forms A and B) was given to 11,000 pupils in 30 cities. Correlations between IQ and age range from .53 to .94, most of them above .75, indicating that IQ's could be determined from classroom records of age. "It would be possible to make tables of IQ's corresponding to each month-age of entrance to, or presence in, or graduation from, each grade, for grades IV to XII, and possibly for earlier grades. The facts needed are available in school systems where intelligence examinations have been given widely. With such conversion tables at hand the work of obtaining IQ's from classroom records of age would be trifling."—*J. W. Macmillan* (Maryland).

4189. Thurston, M. E. **Teaching English to high-school children with elementary-school reading ability.** *Sch. Rev.*, 1942, 50, 423-431.—Grade IX pupils with reading ability below the 7th-grade level who were placed in laboratory English classes showed reading gains ranging from 1 month to 3 years and 4 months at the end of the semester with further gains in the second and third semesters. Improvement in grammar and English usage averaging 1 year and 7 months was observed during the second semester.—*R. C. Strassburger* (St. Joseph's College for Women).

4190. Tiedeman, S. C. **A study of pupil-teacher relationship.** *J. educ. Res.*, 1942, 35, 657-664.—This is an investigation of what junior high school pupils like and dislike in teachers. Among dislikes, they are most disturbed by aggressive or such overt behavior as domination, ridicule, and punishment; less disturbed by more subtle forms such as failure to provide for individual differences, showing of partiality, and personal peculiarities. The best liked teacher is friendly, cheerful, and has a sense of humor.—*M. Murphy* (Pennsylvania).

4191. Toops, H. A. **Code numbers as a means of scoring group-administered performance test products.** *J. appl. Psychol.*, 1942, 26, 136-150.—Usually performance tests are expensive to administer and score because of the difficulty of grading partial performance scores. The addend system allows the valuable partial performance scoring feature to remain while the clerical and administrative work is reduced to the point where it becomes practical to use performance tests in large group situations.—*W. F. Madden* (Middlebury).

4192. Tucker, E. W., & Carpenter, W. W. **Outcomes of military training in schools.** *Sch. & Soc.*, 1942, 55, 613-615.—A questionnaire sent to graduates of 11 military schools and colleges shows that 90% feel considerable carry-over into civilian life of training in leadership, sportsmanship, and discipline and think there should be greater emphasis placed on study and leadership habits. 70% recognize the value of academic and military training and formal ceremonies, and 85% report greater respect for authority. The majority are satisfied with their present careers and do not feel they have been made militaristic-minded, but they have shown their promptness and willingness to respond to the need of the country in time of war and their fitness to be of service.—*M. Lee* (Chicago, Ill.).

4193. Upshall, C. C. **The validity of composite faculty judgment as a method of identifying undesirable prospective elementary school teachers.** *J. educ. Res.*, 1942, 35, 694-699.—Faculty members, at the end of each quarter of the school year, reported the name of one student for each 15 students in their classes whom they thought would make the least desirable elementary school teacher. Those students mentioned three or more times were studied. They were found to be inferior in scholarship (although this factor was not to be taken into account by the faculty), college aptitude, and grades in

student teaching. 4 years after graduation 20% of the women in the mentioned group and 67% of the men were teaching.—*M. Murphy* (Pennsylvania).

4194. Ward, L. B., & Kirk, S. A. Studies in the selection of students for a teachers college. *J. educ. Res.*, 1942, 35, 665-672.—An attempt to discover factors other than intellectual ones which are related to teaching success showed that results on the Bernreuter Personality Inventory given to freshmen were practically unrelated to later practice teaching grades or to ratings by critic teachers. Ratings on personality traits made by high school teachers and principals showed greater relationship with practice teaching grades, but still a low one.—*M. Murphy* (Pennsylvania).

4195. Webster, E. C. A follow-up on vocational guidance. *J. appl. Psychol.*, 1942, 26, 285-295.—81 out of 125 educational and vocational guidance cases were contacted from periods of 2 to 5 years after their initial testing and interviewing. Evaluation of the predictions during the initial guidance period showed that 80% of the vocational guidance, and 92% of the educational recommendations were successful. 82% of the clients reported value received from their examinations.—*W. F. Madden* (Middlebury).

4196. Williams, E. I. F. Concerning students in the education courses of a liberal-arts college. *Sch. & Soc.*, 1942, 55, 620.—At Heidelberg College education students (a little over half of the juniors and seniors) have higher grades, higher average intelligence, and receive more general honors than non-education students, in contrast to the reports from other similar investigations.—*M. Lee* (Chicago, Ill.).

4197. Wolf, R. R., Jr. Do scholarships accomplish their purpose? *Sch. & Soc.*, 1942, 55, 732-735.—A comparison of the records of scholarship and non-scholarship men at Yale shows that as large a proportion of the former as of the latter engage in extracurricular activities, in spite of fewer available hours at their disposal, a larger percentage of the former hold positions of leadership on the campus, and their participation in athletic activities is close to statistical expectancy.—*M. Lee* (Chicago, Ill.).

4198. Wren, H. A. Vocational aspiration levels of adults. *Teach. Coll. Contr. Educ.*, 1942, No. 855. Pp. vi + 150.—The vocational aspirations of 871 male clients of the Adjustment Service in New York City were studied with respect to the clients' vocational status. It is concluded that the level of aspiration is related to: dominance as a personal characteristic, familial occupations, certain abilities, education, and income. Age, marital status, employment stability, and length of supplementary education are unrelated to the aspiration level. Bibliography of 53 titles.—*L. Birdsall* (Coll. Ent. Exam. Board).

[See also abstracts 3968, 4042, 4059, 4064, 4081.]

## MENTAL TESTS

4199. Burt, C., & John, E. A factorial analysis of Terman Binet tests. Part I. *Brit. J. educ. Psychol.*, 1942, 12, 117-127.—Stanford Binet scores of 483 boys and girls representing an MA range of 10-11½ years, with CA's between 10 and 14½ years, were analyzed. Tetrachoric correlations for the 12 tests of the scale in the age range considered were computed as ranging from -.38 to .87. Analysis of the correlational matrix to provide a comparison of the alternative bipolar-factor and group-factor methods indicates that with the former procedure the correlations can be completely accounted for by 7 factors. Of these, the first, which contributes most to the variance and has positive saturations throughout, is identified as general intelligence with a strong verbal bias. Its contribution of 30% to the total variance compares with a figure of 42% found in an earlier similar analysis of data from 600 unselected cases.—*R. C. Strassburger* (St. Joseph's College for Women).

4200. Carlton, T. A comparison of the Revised Stanford-Binet, Form L, with the Kuhlmann Tests of Mental Development. II. Performances of mentally defective children. *J. appl. Psychol.*, 1942, 26, 159-167.—Both tests were given to children of the Minnesota School and Colony who had an IQ above 50; no serious speech, physical, or sensory handicap; and had not been classified as clinical types. It was found that the IQ's from the two tests may neither be combined nor interchanged.—*W. F. Madden* (Middlebury).

4201. Ferguson, G. A. The reliability of mental tests. London: University of London Press, 1941. Pp. 150. 6s.—[Abstracted review; original not seen.] The study, which is both theoretical and experimental, concerns the reliability and validity of intelligence, English, and arithmetic quotients derived from the Moray House Group Tests compared with individual tests in the same respects.—*R. C. Strassburger* (St. Joseph's College for Women).

4202. Lewinski, R. J. A qualitative analysis of the Kent Oral Emergency Test as a clinical instrument in the examination of naval recruits. *J. appl. Psychol.*, 1942, 26, 316-331.—There are two shortcomings of the Kent Oral Emergency Test: (1) no qualitative or quantitative analysis of possible responses to the various test items, (2) no analysis of individual items to show their diagnostic value were presented in the original monograph. On the basis of 300 subjects examined at a U. S. Naval Training Station, the author presents typical answers to illustrate plus responses, borderline responses, and minus responses. Each item is also analyzed for its diagnostic significance on the basis of the frequency of credits earned.—*W. F. Madden* (Middlebury).

4203. Older, H. G. A note on the twenty-minute time limit of the Otis S-A tests when used with superior high school students. *J. appl. Psychol.*, 1942, 26, 241-244.—Two groups of high school juniors and seniors were given the ACE under identical condi-

tions. The Otis S-A test was given to one group under the 30-minute time limit and to the other group under the 20-minute time limit. Results indicate that the 20-minute time limit is not justified even with somewhat superior juniors and seniors and for survey purposes, if such scores are going to be compared with 30-minute scores made by any other group. However, correlations between the ACE and Otis test scores under both time conditions are approximately identical. "Thus the test may be used with a 20-minute time limit for research purposes . . . as it does place subjects in the same relative rank as the ACE with even slightly greater accuracy than does the 30-minute test."—W. F. Madden (Middlebury).

4204. Saffir, M. A. The measurement of children's abilities. *Proc. Inst. Med., Chicago*, 1942, 14, No. 5. Pp. 2.—Abstract.

4205. Thorndike, R. L. Two screening tests of verbal intelligence. *J. appl. Psychol.*, 1942, 26, 128-135.—There have been demands for a very short screening test of intelligence in certain situations such as in the American Institute of Public Opinion surveys of the American voting public. Two such screening tests, both of vocabulary, were developed. The first consisted of a multiple choice vocabulary test taken from the IER Intelligence Scale, CAVD; its estimated reliability was .83, with a possible .90 under a perfect criterion. The second test was made from the Binet vocabulary; its estimated reliability was about .90. Scores on both screening tests were converted into MA's.—W. F. Madden (Middlebury).

4206. Wells, F. L., & Ruesch, J. [Eds.] Mental examiners' handbook. New York: Psychological Corporation, 1942. Pp. 122. \$2.50.—This is a pocket-sized book of verbal and pictorial test materials for the informal use of the psychiatric examiner. It allows an over-all evaluation of psychological status of adult patients above a mental age of 7 years. A minimum of directions is provided since the examiner is assumed to be competent to develop his own methods of examination and norms. The book may be folded back so that directions and materials are on opposite sides. Special cue-sheets for recording results may be obtained. Part I consists of 18 tests of verbal character: auditory and visual digit span, absurd sentences, likenesses and differences, opposites, arithmetical computation and reasoning, Kent EGY and Kappa questions, numerals and alphabet, reversed words, sentence-building, interpretation of fables, proverbs, vocabulary, verbal portion of Bellevue Scale, word association list, and stories for abstraction of content. Part II is composed of 19 picture tests, the procedure and materials for examination for aphasia, and a detailed mental status outline. Pictures of objects are provided for testing naming, immediate memory, abstraction, recognition of likenesses and differences, opposites, absurdities, etc. 6 pictures are provided for projective purposes. Pertinent reference sources are listed for many of the tests.—D. B. Lindsley (Brown).

## CHILDHOOD AND ADOLESCENCE

4207. Buehler, C. En överblick av barnpsykoterapins nuvarande läge. (The present status of child psychotherapy.) (Trans. by A. Sörensen.) Stockholm: Natur och Kultur [1941?].

4208. Colby, M. G., & Robertson, J. B. Genetic studies in abstraction. *J. comp. Psychol.*, 1942, 33, 385-401.—185 children, ranging from 3 to 9 years, after having been presented with a stimulus card containing a colored geometrical design, pointed out a "similar" object on a response card containing 8 different colored designs. They were re-tested after one year. The results indicate both constitutional and age factors at work. There was a very small group of very stable form and color types at all age levels and a smaller group of unstable types. The general developmental trend was indisputably toward form. At no age level was there an overwhelming color dominance as reported in other studies. "Hence these data do not support the claim that young children invariably show a rigid, inflexible one-tract abstraction process. This tendency is only relative, not absolute, and is subject to wide individual differences."—K. F. Muenzinger (Colorado).

4209. Harshe, W. R. The Reed poll. *Publ. Opin. Quart.*, 1942, 6, 291-294.—A description of a poll, patterned after Gallup's, among children of school age. Some results are given.—H. F. Rothe (Minnesota).

4210. Jenkins, R. L., & Beckh, E. Finger puppets and mask making as media for work with children. *Amer. J. Orthopsychiat.*, 1942, 12, 294-301.—A description of how finger puppets can be made, their use by children, and the way they may be employed in therapy is accompanied by an illustration of 2 puppets. Mask making as another possible outlet for emotional expression is also described.—R. E. Perl (Jewish Board of Guardians).

4211. Krugman, J. I. A clinical validation of the Rorschach with problem children. *Rorschach Res. Exch.*, 1942, 6, 61-70.—25 children, ranging in age from 5-3 to 18-2, referred to a grant of the Bureau of Child Guidance, Board of Education, New York City, were the subjects of this investigation. For each subject case studies, two sets of Rorschach interpretations made independently by the author at an interval of a year and a half, and "blind" interpretations by the chief psychologist were used. 3 judges were each given the sets of independent interpretations in 4 groups, with 5 pairs in each group, and all judges matched them perfectly. 7 judges also matched the Rorschach response cards and scoring tabulations with the interpretations. Average percentage of successful matchings in this part of the study ranged from 80 to 100%. Rorschach interpretations in outline form were matched with outlines of clinical case study abstracts in groups of 5 pairs, with an average of 84% correct matchings. Judges also rated charts of Rorschach interpretations and case study abstracts for agree-

ment on given aspects. The author concludes that the Rorschach personality interpretations of these problem children possess a high degree of objectivity, reliability, and clinical validity.—R. E. Horowitz (Washington, D. C.).

**4212. Lippitt, R. The morale of youth groups.** In Watson, G. *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 119-142.—This chapter interprets 20-odd studies of the behavior of face-to-face youth groups. Generalizations are presented under 5 subheadings: (1) satisfaction or dissatisfaction with group life (children are often satisfied with adult domination, those most upset by authoritarian leadership have previously experienced democracy), (2) interpersonal relations and group structures (optimum and maximum freedoms differ, too much or too little freedom tends to produce "status hierarchy"), (3) origin of the forces making for group unity (difference between unity derived from resistance to external pressure and from "spontaneous inner sources of cohesion"), (4) meeting of group emergencies and frustrations (removal of the leader produces decrease of purposeful activity in authoritarian groups, type of cohesion affects the group reaction to frustration), (5) group and individual goals, productivity, and time perspective (these are generally enhanced by democratic group experience).—S. S. Sargent (Barnard).

**4213. McDaniel, H. B. The American newspaperboy; a comparative study of his work and school activities.** Los Angeles: Wetzel Publishing Co., 1941. Pp. xiv + 139.—This appears to be the first comprehensive study of the American newspaperboy. A summary of previous surveys is given. A sample of 706 newsboys from 15 representative cities from all parts of the United States and a control group of 687 boys from the same cities were used. The three major objectives of the study were: (1) an occupational analysis of the work of newspaperboys on a national scope, (2) an investigation of the school activities and achievements of newspaperboys, (3) the discovery of the interrelationships among the various aspects of the boy's work and school life, and their possible effects upon his present and future adjustment. Detailed reports of the findings are given together with recommendations for changes in the status of newspaperboys.—S. C. Erickson (Arkansas).

**4214. McKinnon, K. M. Consistency and change in behavior manifestations.** *Child Develpm. Monogr.*, 1942, No. 30. Pp. xii + 144.—The behavior of 16 children was studied for a 5- to 6-year period in the same school, beginning at the nursery school level, through information provided by school records, conferences with teachers, and direct observation. Each child was placed in a grouping that represented the "dominant or most conspicuous characteristic of his behavior as a whole." There were 4 such groupings: conformity (of a constructive sort), caution (including lack of self-confidence), invasiveness (forcible and active approach to materials and persons), withdrawal. 10 of the 16 children con-

tinued from age 3 through age 8 or 9 to remain in their original grouping. The main direction of change, when change occurred, was toward conformity. Invasive behavior was tolerated less by a child's peers and by adults as he grew older. Predominant modes of behavior that persist tend to become less conspicuous with age by reason of protective devices, increased resourcefulness, increased ability to acquiesce in requirements, in theory even if not in practice. Changes in behavior may appear several years after guidance has been instituted. "The shift in dominant behavior trends was always in the direction of a form of behavior that had been evident but less pronounced at an earlier age."—A. T. Jersild (Columbia).

**4215. Murphy, L. B. Children are important to morale.** In Watson, G. *Civilian morale*. Boston: Houghton Mifflin, 1942. Pp. 95-118.—A good-sized minority of children is frustrated and insecure because of bad economic conditions and inadequate parental love and attention. In upper-class groups many developmental hazards are avoidable: e.g. isolation, constriction of activities, inadequate emotional experience. Numerous cases reported by WPA nursery school teachers show the close relationship between personality problems and family economic insecurity. There is need for extended services for young children; a census of their needs should be taken. Any such program should include direct help to children, education of the public, direct help to mothers, and research in diagnostic and therapeutic methods.—S. S. Sargent (Barnard).

**4216. Witty, P., Smith, E., & Coomer, A. Reading comics in grades VII and VIII.** *J. educ. Psychol.*, 1942, 33, 173-182.—224 7th and 8th grade pupils were selected at random from a group which had been interviewed and been given a questionnaire concerning the reading of comic magazines and comic strips. Results obtained are compared to results of a previous study (see XVI: 3855, 3856) made with pupils from the middle grades. "The average number of magazines read was about 13 or 14 in these [higher] grades; two of these were read regularly; and three and one half, often. Comic strips also were generally read; 26 was the average number reported to have been read. Of these, about 15 were read regularly; and five, often. Sex differences and grade differences were not pronounced, although they were more noticeable at this level than in the middle grades. There was a slight decrease during the seventh and eighth grades in the number of comic magazines read, but the average number of comic strips was remarkably consistent." "About half the children make their own comics. This tendency was found in both grades although a sharp decrease occurred in the eighth grade. This investigation adds corroborative data showing that at the present time reading the comics represents a general interest which in grades IV to VIII is relatively uninfluenced by differences in age or grade, sex or locality."—J. W. Macmillan (Maryland).

[See also abstract 4204.]

